

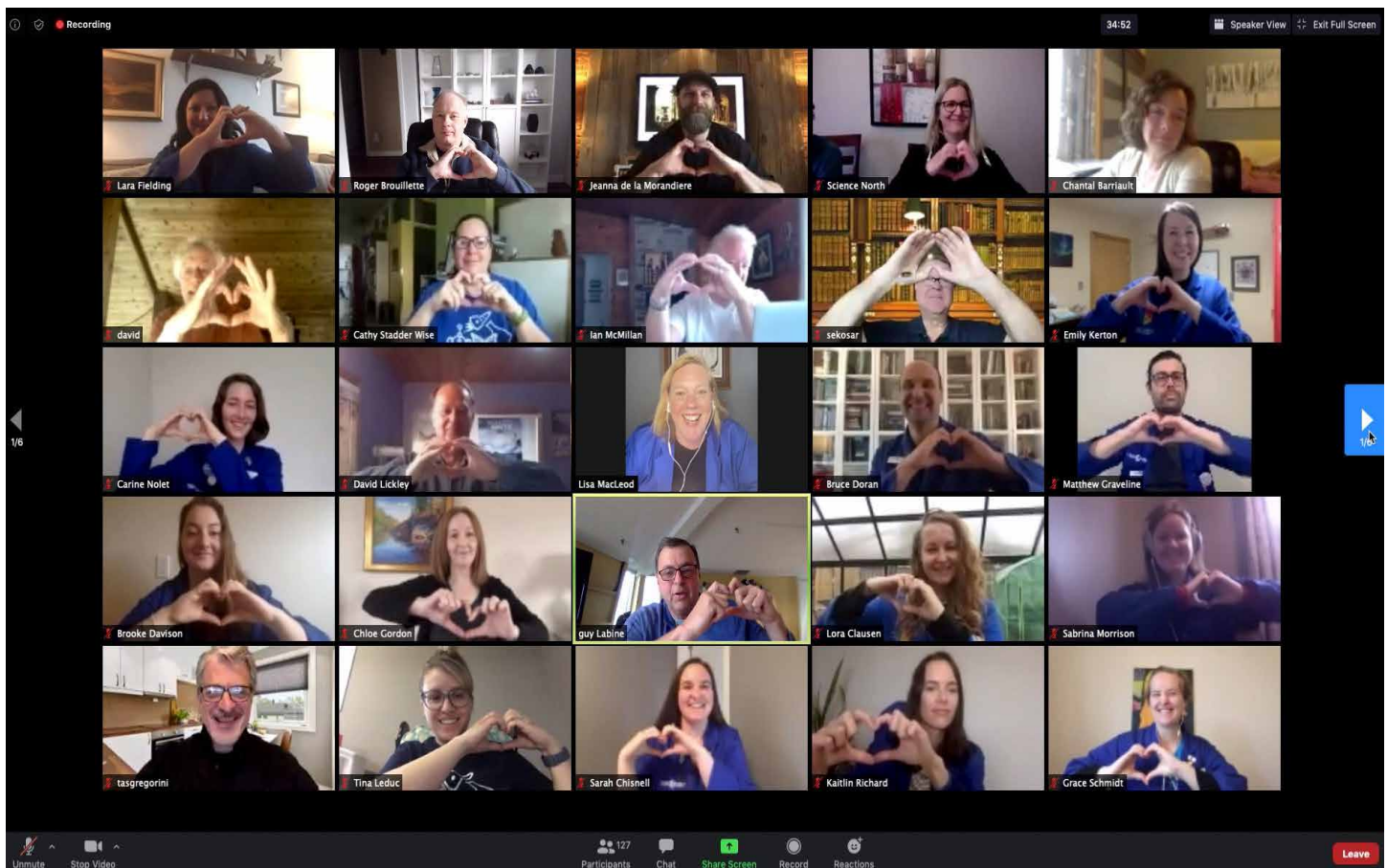


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INFORMAL LEARNING REVIEW

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INSIDE: The pieces within were written in May 2020. They reflect the many pressures and challenges felt by the museum world during the unpredicted Covid-19 pandemic.

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INTRODUCTION

The pieces that follow were written in May 2020 while most museums were closed due to the Covid-19 pandemic.

As we were putting them together, the murder of George Floyd, a black man, by a white police officer in Minneapolis sparked unprecedented civil unrest in the United States, with echoes around the world.

We recognize that this, our second special issue of the ILR, may not be as timely or relevant as it might have seemed two weeks ago. We offer it in the hopes that it will still be of use, and with gratitude to the authors. Feel free to post it, tweet it, and share it as you see fit. Our first free special issue is also available and you can [find it here](#).

Smithsonian Secretary Lonnie G. Bunch issued a statement on May 31 <https://www.si.edu/newsdesk/releases/statement-secretary-lonnie-g-bunch>. In his words, "We hope... that this moment becomes the impetus for our nation to address racism and social inequities in earnest. One place to start is the Smithsonian National Museum of African American History and Culture's newly released Talking About Race portal <https://nmaahc.si.edu/learn/talking-about-race>

Mac West, Editor

Karen Wise, Associate Editor

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TOMORROW'S NORMAL: THE NEED FOR TRAUMA-INFORMED APPROACHES

By Dina Bailey

I have been thinking about trauma - what it is, how it connects to societal change, and why it is necessary for the museum/cultural sector to consciously develop trauma-informed approaches. Before researching, I thought of trauma as only related to severe acts of violence, a concept not to be trivialized.

As I began studying trauma more intentionally, I came to understand that trauma is, "less about the content of an event than about the impact - sudden, and then ongoing - that it has on our physiology" (Treleaven, 2018, p. XIX). Additionally, "any experience that is stressful enough to leave us feeling helpless, frightened, overwhelmed, or profoundly unsafe is considered a trauma" (Ogden, 2015, p. 66). Symptoms of trauma may include: isolation, anxiety, recklessness, loss of appetite, or nightmares. As Stephen Cope said, "Sometimes we encounter experiences that so violate our sense of safety, order, predictability, and right, that we feel utterly overwhelmed - unable to integrate, and simply unable to go on as before. Unable to bear reality. We have come to call these shattering experiences trauma." Just as with natural disasters, a pandemic has the potential to be traumatically experienced in a variety of ways.

I believe that the intense individual, and collective, traumas that are being experienced due to COVID-19, and quarantine, have yet to be fully recognized or understood. Throughout quarantine, some people have worried about the increase of rapes, domestic abuse, and murders. Others have seen systemic inequities with more clarity; the social context of trauma must be acknowledged. Systems are in place that leave some groups more vulnerable to trauma...and, others more protected from it.

As those in positions of influence make plans for re-opening, and post-opening, I implore everyone to be actively developing trauma-informed approaches - not just considering the physically safest and most expedient way to open sites with the least amount of liability. Trauma-informed approaches will make spaces safer for both staff and visitors by emphasizing the physical, psychological, and emotional safety of everyone. In order to do this, leaders should develop a foundational understanding of what trauma is and how it manifests in individuals and groups. The Four R's of a trauma-informed approach are: realize, recognize, respond, and resist re-traumatization.

In focusing on response, there are principles of trauma-informed approaches that will be helpful. These principles respect the need to create opportunities for individuals to strengthen their sense of control and empowerment. The six principles include: safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment and choice; and cultural, historical, and gender issues. As re-opening and post-opening become realities, I hope the museum/cultural sector uniquely finds ways to provide healing opportunities to both staff and visitors. May we embrace vulnerability rather than shy away from it. As we know, "Not everything that is faced can be changed; but nothing can be changed until it is faced" (Baldwin, 1962, p. 38).

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ARE YOU TAKING FULL ADVANTAGE OF THIS CRISIS? RETHINKING WHILE REOPENING

By David E. Chesebrough

I advise more than just museum leaders - I also coach some who run other entities, including for-profit small businesses.

I work with a friend who built a great local reputation for his craft brewery. He started small on the family farm, brewing in the old stable. His tasting room in the adjacent barn/house became a country destination.

As the popularity of his beers grew he opened a tavern/tasting room in the city three years ago and was building that up.

Then Covid-19 hit us all.

Like many restaurant-based small businesses it has taken a huge hit. He has laid off 80% of the staff and is re-evaluating his business and its potential - even viability - for the future.

What strikes me, though, is his positive attitude and his sense that this has given him an opportunity to rethink his business. He knew some areas needed improvement to make it even more successful and sustainable going forward.

Here are his three focus areas as he plans the rebuilding and re-opening of his full enterprise:

- Identify, strengthen and *refocus on his core business* that is truly special - while looking at more ways to connect with customers on a regular basis.
- Have as *efficient, flexible and resilient* an operation as possible.
- Rebuild his staff slowly, carefully and cautiously with a *strong adherence to the culture* that is unique to his business – have them all strongly represent his *Brand*.

I don't see much difference from the conversations I've had with museum CEO colleagues.

Do you?

He is also looking at incorporating the successful experimental elements of his current reduced operations into his future business plan, including:

- *Be continually creative and connect better remotely with customers* – for example he has instituted virtual tastings with 30 couples/groups max – they buy food and beer through his take-out and then all participate in the tasting, via Zoom. By limiting the size everyone can see one another and interact, building community and loyalty.
- *Strengthen their technology backbone* – looking for efficiencies, flexibility and expanded reach.
- *Financial resilience* – have a more flexible, diverse and sustainable financial model accounting for a vastly reduced throughput for the near term. (e.g. take-out will be sustained and emphasized - having him also better positioned for another Covid-19 shut down.)

Does any of this sound familiar or relevant to the conversations in your organization?

For example, will your museum keep the same level of online resources available?

If so, will you transition some or all to a fee-based model? Will you transition the “free” access to part of a membership level, school contract or partnership arrangement?

Is there some way that you have been successfully staying connected and remotely accessible to your membership families? Can you sustain that so that your interaction and value proposition to members and community transcends the occasional visits to your science center or museum?

I am sure that you and your team are already asking these types of questions.

Are you looking at this crisis as an opportunity to rethink and refocus your institution with the positive attitude and even thankfulness that my business friend has?

Be well, be resilient and be creative!

David E. Chesebrough is President Emeritus, COSI and principal, Chesebrough Solutions LLC. He can be reached at David@ChesebroughSolutions.com.

REBOOTING EXTROVERSION

By Jennifer Clearwater, CFRE

The chances that you are reading this and you and I have never met are extremely high, and yet I want you to know that I MISS YOU. A classic Jung extrovert, I am very much like my fellow extroverts in that we, "...tend to search for novel experiences and social connections that allow (us) to interact with other individuals as much as possible. Someone who is highly extroverted will likely feel bored, or even anxious, when they're made to spend too much time alone." (Psychology Today, *Signs of Extroversion*, <https://www.psychologytoday.com/us/basics/extroversion>).

Wow, does that describe me to a T, especially since the world shut down two months ago. I typically talk to everyone, everywhere, for any reason, all the time. I'm the person who had to be sat down by her family prior to my first trip to New York to be educated on how to fit in with NY culture. "Listen," said my younger brother. "You can't be YOU out there. People will eventually talk to you, and they will be kind and friendly, but you can't overwhelm them. You have to let them start." He also told me not to make eye-contact with musicians or someone who loses their cool and starts yelling at someone else on the subway; advice that became applicable all in the mix of one 20 minute ride to Queens...but, that's a story for another day.

So yeah, I've been hopping on and off the struggle bus during this #StayHome time. All it takes is one cloudy morning with no Zoom or Teams meetings scheduled that day and I'm under the covers with Emo bands looping on Spotify.

I started to wonder how everyone else was getting through this, how they were keeping their chins up when the isolation became too much, and that's when I remembered that many people aren't extroverts. Honestly, even I can recognize that I'm not a 100 percent extrovert. I'm capable of and truly do enjoy some very quietly contemplative things, like meditation, yoga, my daily commute alone in my car that I LOVE to drive (gosh, I MISS those drives), reading quietly in a sunny window, walks through all the amazing parks and nature centers of Wisconsin; I can't even imagine the lunacy that would be my life if I didn't have those occasional quite moments of reflection.

That's when my mind started drifting to thoughts of all my very introverted colleagues. Are they loving this time alone? Are they thriving in this situation? Are they – GULP – grateful for this time apart from ME? Do I overwhelm

them? Oh God...does my need to be fueled by interacting with them suck the life out of them? Am I am the Emperor Palpatine to their Rey and Ren?

Ugh. I certainly hope not, but I'm giving those thoughts a little room to hang around right now. Because right now, I'm bouncing off the walls to interact with people in-person. Right now, I'm already telling everyone to expect awkward hugs from me when I see them next – I'm practically demanding it. Right now, I'm hearing the uncomfortable cringe-worthy response from my more reserved colleagues to me saying that, even when their Teams mic is muted.

What this distance has done for me is make me acutely aware of the fact that sometimes I am 100 percent extrovert and sometimes that makes me a lunatic to someone who isn't. That same quality that makes me successful in my fundraising job and as an entrepreneur and leader might also be the thing that drives some people to pretending like they didn't see me from across the room in public so that I don't smother them in a brief but overpowering exchange and drain their life-force.

Maybe sometimes I do come across like Emperor Palpatine, but maybe there's actually a Baby Yoda deep down at my core. Maybe this time apart is just the reboot that my lunatic tendencies needed to be the best non-smothering extrovert with healing interaction that I can be on the flip side.

Jennifer Clearwater is a Certified Fund Raising Executive (CFRE) and the Director of Philanthropy for Discovery World. She is also an entrepreneur and the Founder/CEO of Lovino Sangria. Connect with her on LinkedIn or Twitter @jenwater.

SEIZING DISRUPTION

By Christy S. Coleman

Museum leaders around the country are engaged in conversations about what reopening facilities can be in the midst of the Covid-19 pandemic. Having participated in many, I'm struck by the desire to 'get back to normal,' even with the recognition that 'normal' is relative. None of us knows how the public will respond to changes being made in operations and program delivery. We have no idea what the longer term impact on our finances will be or what our staffing levels will look like. Interestingly, I can only recall a few instances where discussions about how this extraordinary disruption can be seized to make our organizations better.

For anyone paying attention, this crisis lays bare a number of structural issues that our field has wrestled with for decades. Among the most pernicious are pay inequity and lack of diversity in a list that includes financial, leadership and business models among others. For a variety of reasons, few feel equipped to dig deep, experiment, and embrace risk to seek solutions to these issues. In all fairness, in most cases, this isn't a result of ambivalence, but rather the issues seem insurmountable. Instead, some leaders chose to nibble at these issues following the old proverb of eating the elephant one bite at a time.

The issue of pay inequity came screeching into the limelight a few years ago. Frustrated entry- and mid-level museum professionals started posting pay levels in a database that was widely shared. The majority of entry level positions were barely higher than the minimum wage- which hasn't been raised in 30 years. Subsequent research also reveals a widening gap between museum executive pay and frontline staff mirroring the corporate world. Making matters worse, in an industry where women account for nearly 65% of the workforce, men (especially white men) represent over 80% of leadership roles. When it comes to financial crises, those barely earning a living wage are often hit first.

The field also struggles with ethnic and racial diversity. With low entry wages, demands for seemingly arbitrary credentials coupled with limited opportunities for advancement, the field isn't attractive for many people of color. Unconscious bias and microaggressions within the workplace force talented people out. Making matters worse, only recently have conversations begun or more intentional efforts made to decolonize museum offerings for visitors. As a result, many museums are still perceived as unwelcome places for communities of color.

So what do we do? How do we seize the opportunity this pandemic presents to make our museums better? We start with understanding that the public trusts our organizations as places of engagement, learning and meaning rather than using that fact as an excuse for the status quo. We look at what kind of impact we want our museums to have based on the needs of an ever-changing public. Understanding those needs, we become proactive, nimble and responsive. We determine what it takes to deliver on those needs. We reinvent rather than ride the latest trends. We leverage expertise to build teams focused on impact. We determine which processes, systems and programs will eliminate structural disparities. We seek integrated partnerships versus transactional ones. In other words, we literally start from the ground. This is our moment- our opportunity. We can do this... we must.

With over 35 years in the museum field, Christy S. Coleman serves as Executive Director of the Jamestown-Yorktown Foundation. You can follow her on Twitter [@HistoryGonWrong](https://twitter.com/HistoryGonWrong)

COLLECTING STORIES OF COVID-19: A NEW FUTURE FOR HISTORIC HOUSE MUSEUMS?

By Avi Decter and Ken Yellis

Historic house museums are the most numerous and most ubiquitous class of museums in America. They are touchstones in our national landscape, preserving important dimensions of our heritage, enriching and deepening our sense of place and connection with our past.

They are also in some ways the most challenged of museums in the pandemic and post-pandemic period. Schools, their principal audience, will be a long time settling back into routines; hosting school groups in historic houses under current physical distancing standards seems virtually impossible.

Difficulty notwithstanding, keeping members of this class of museums viable is important. Thousands of communities across the country preserve and support one or more of them. Many of these communities have no other kind of museum; their historic house museums often function as a community's decorative arts collection, art gallery, hands-on learning center, and, sometimes, even its natural history and science exhibition, such as the Vanderbilt Museum in Centerport, New York.

These historic house museums do much for their communities. Many serve as the headquarters of the local historical or preservation societies. Many are staffed entirely or primarily by volunteers. Operating budgets tend to be modest and tied closely to the needs of the building and the grounds. Endowment funds, where they exist, are often constrained by donor-directed restrictions. Even when they are directly supported by public monies, they tend to get the short end of the stick—especially in times of fiscal austerity or social crisis.

Historic house museums are, in short, highly vulnerable. The current pandemic has closed these museums for the duration—and probably beyond. Since their principal audience is likely to be children from local or area schools, so long as schools are closed, visitation will suffer. Even after schools re-open, they will have their hands full making up for lost time and dealing with student safety, so field trips and off-site programs are likely to be a low priority. Developing new audiences and finding new sources of support are bound to be even more challenging for cultural and historical organizations in this environment than they have been in the past.

What is to be done? There are several alternative strategies that come to mind. For many, going dark may be the only near-term option, but even that requires planning and ongoing oversight. Similarly, sale to private owners with restrictive covenants would have some appeal, but if there were such a buyer careful planning would be needed. Re-purposing is another option. For example, transformation into a research center would feel like a natural adjustment, particularly if the tenant were affiliated with a university or college. Other forms of adaptive re-use under the aegis of a larger entity are conceivable as well.

The most interesting, flexible, and demanding approach is to undertake development of a new generation of outreach, such as by providing online resources, conducting on-site or virtual programs, offering outreach programs, sponsoring projects on local responses to the pandemic, and new kinds of initiatives. A lot of historic house museums limit their programs to tours of furnished rooms or open-hearth cooking demonstrations, but others—for example, Lincoln's Cottage in D.C. (www.lincolncottage.org) or the Harriet Beecher Stowe House in Hartford, CT (www.harrietbeecherstowecenter.org)—offer highly innovative, provocative, and engaging programs.

One model is that of The Jewish Museum of Maryland, which is collecting stories of life during the COVID-19 public health crisis, encouraging the public to submit their experiences, through words, written or recorded (poetry, journal entries, letters, essays, or just some jotted down thoughts), images (photos or drawings), or objects that would help the museum preserve the memories and experiences of Jewish Maryland for future generations (www.jewishmuseummd.org). Similar efforts are being conducted by the Newport Historical Society (www.newporthistory.org) and the Rhode Island Historical Society (www.rihs.org).

Projects of this kind could be focused on young people—secondary school and college students in particular—not as the audience but as the creators and developers of such projects. The historic house then becomes a nursery of ideas and a laboratory for experiments in historical reconstruction and imagination. The young need to find connections to this great legacy.

We all do. It is too soon to know what Americans will seek

in the aftermath of COVID-19 but we know this experience has taken an enormous emotional toll. There are many kinds of healing that need to take place, but for many it starts with touching base, reminding ourselves who we were, who we are, who we can be. For that, in so many places, we have but to look around.

Ken Yellis (kenyellis@aol.com), principal of Project Development Services, is a historian with four decades in the museum field. Yellis has worked extensively with the [Museum Education Roundtable](#) and has been involved in over a hundred history, science, and art exhibitions.

Avi Decter (avidecter@gmail.com) has worked in public history for over forty years, and is the author of [Interpreting American Jewish History at Museums and Historic Sites](#). His many projects include the Boott Cotton Mill at Lowell National Historical Park; the U.S. Holocaust Memorial Museum; Louisville Slugger Museum and Visitor Center; and the National Civil War Museum in Harrisburg, Pennsylvania.

WE ARE ALL IN THIS TOGETHER

By Heather Farnworth

As we all navigate this new “abnormal,” as some are calling it, many of us are recognizing the importance of collaboration as a core value of any strong community. But where does this collaboration need to lead us? It needs to lead us towards a new and stronger resilience.

Being resilient is about the capacity to recover quickly from difficulties, a quality that is proven again and again to be bolstered by community. It is about developing a nimbleness and a flexibility to respond to challenges that we face—something that is done more easily when we have others to lean on and learn from. Bottom line: building resilience means building relationships.

As we move through this pandemic and contemplate getting back to business, connecting to each other through strong networks is critical not only for survival, but also for transcendence and transformation. Humans are instinctively inclined to herd together for safety and survival, to self-organize into skill sets and use resources based on priority and need. But that is not enough unless there is a willingness to accept change. And change is easier to accept as you see others changing, learning from each other, and looking forward to the future, not back.

Research done on community responses post-disaster, fires, floods, earthquakes and pandemics show that **existing strong networks** of people can mobilize very quickly and effectively, but only if they have a strong base from

which to begin. Having this point of connection and shared commitment to help one another creates an ecosystem of people with skills and resources that allow everyone to be stronger. Without fear of isolation, people are more inclined to keep an open mind and are capable of discovering new opportunities and new perspectives.

The value of collaboration has never been more evident than over the past few months as our Traveling Exhibitions Network (TEN) and other community networks have come together to build our collective knowledge and brainstorm new ideas through webinars and Zoom calls. Specifically, TEN has formed working groups to address the logistics for de-installations and installations, to develop materials that measure and demonstrate the value of traveling exhibitions, and to conceptualize the role that interactive exhibits will play in future exhibitions. We are reaching out and connecting with our science centre and museum friends and colleagues from around the world, sharing best practices and helping one another through these challenging times. Although some of us serving on these working groups are competitors, we share a common goal: to offer the very best traveling exhibitions to our clients for many years to come. In this time of crisis, we are leaning on the strength of our community to better our entire industry. We are cultivating resiliency.

We know that the future will not be about returning to the status quo—it will be about being able to adapt to change

to this new “abnormal,” it will be about opening up our minds and our hearts, and it will be about working together in new ways we otherwise could not have predicted. Our Traveling Exhibitions Network is strong and resilient. We are here for each other and we are here for all of you.

We are looking forward to getting back to business and seeing all of you in person! When we do so, we will be ready for the next time we are presented with any seemingly daunting challenges because of the groundwork we are laying today, together, as one community of colleagues.

TEN (Traveling Exhibitions Network) Board

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<https://www.aam-us.org/professional-networks/traveling-exhibitions-network-ten/>

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FOUR HUNDRED MILLION REASONS

By Derek Fish

I read with great interest the articles in the previous ILR special issue, fascinated by the comments and responses to our current situation. I know many of the authors personally, and have visited many of their great institutions, but I couldn't help feeling just how far removed it is from our reality in South Africa. I have had the privilege of directing Unizulu Science Centre for thirty years, long enough to meet as adults many of the children who visited during that time. Doctors, engineers and science teachers have shared with me how a childhood visit to our SC changed the direction of their lives. While our staff complement is now almost 20, I started alone, so I have revelled in being at the coalface for all that time:- personally teaching and presenting to pupils and their teachers, while directing the centre. While we have always strived to enrich and extend, science centers in South Africa are inescapably part of the educational system, as they are probably the only place where science pupils ever see live demonstrations or interact with equipment. With family life devastated by poverty, HIV-Aids, migrant labour and many other factors, almost the only way to get visitors from rural areas is in school groups. What can we do for these severely disadvantaged communities in the current crisis?

Science centers are still in their infancy in Africa (see the excellent article by Trautmann and Monjero in ILR issue 154 Jan 2019) but South Africa has over 30 of various sizes and has built up a vibrant network which hosted the Science Centre World Congress in 2011. In a survey conducted by the Southern African Association of S & T Centres (SAASTEC) recently, most of these 30 organisations

reported severe disruptions to their administration, finances, programme offerings and stakeholder relations by the current pandemic. Most reported that they were not sufficiently connected digitally to maintain contact within their organisations effectively, let alone with the children they serve. I was privileged to tour science centers in Ethiopia in January this year, as part of the SC Global Workshop, where amazing work has been done in recent years setting up STEM centres across the country, mostly linked to universities. In response to discussions on our situation in South Africa, a science center colleague there wrote:

“I hope you are safe. Our situation in Ethiopia is the same. It is strict lock down and power cut has become common, especially in my area. Let alone the students, I couldn't get access to the internet regularly except for emails and document downloads. Although we could not reach our students and we are not sure when we might reopen, we could possibly do research jointly.”

As someone who loves to present science, I have initiated twice-weekly public astronomy talks and pop-up science classes for pupils from our local primary school via Zoom. These have been well-received and I have loved exploring this new medium. But they have reached no further than the wealthy village in which I live, where we enjoy fast, stable internet. I have lost contact with our usual audience, the thousands of rural children for whom digital connectivity is only a dream. We are still under full lockdown and our children have not yet returned to their schools, so we have no way to reach them currently. But even when they do return, how will we get them back into our centres, or

connect with them, when digital presentation is still not an option?

Africa's 400 million children have always lost out in so many areas, not least science education. Science centers have been a guiding light in the darkness and deprivation, but that light is flickering and we cannot let it fade. We have started meeting and trying to strategize as science center's in South Africa, and are trying to keep up links with promising projects in Ethiopia, Kenya and elsewhere:- but it is tough and the future is not at all clear. So much

good has been done through SC's in Africa with the assistance of colleagues from overseas. Please stay connected with us: we must ensure that this good continues and is not allowed to die:- we owe it to the children.

Derek Fish is the director of the Unizulu Science Centre, Richards Bay, South Africa, a department of Zululand University. He may be reached at thefish@iafrica.com.

WHAT'S NEXT?

By Christy Flint

As educators, we know how to go with the flow and adapt our programs for those unforeseen moments that can distract an audience from our planned messages—ambassador animals taking care of bodily functions in the middle of a presentation; unexpected rain showers during a field experience; tried-and-true experiments inexplicably failing in front of a rapt audience. We are adept at immediately turning those potential disasters into teachable moments—"Yes, everyone poops!" "Let's talk about the water cycle!" and "Science involves a lot of try, try again!" But closing our doors for a pandemic is one moment most of us never expected. After the initial questions of "What do I need to secure in my workspace?" "What things should I take home?" and "How long might I be gone?" were settled, the reality of being a museum educator without a museum set in.

As we all adjusted to the unforeseen moments sprinkled throughout our teleworking days—supporting the learning goals of our children; negotiating space and resources with our new coworkers (pets and significant others alike); and learning how to navigate Zoom and MS Teams—we started to ask ourselves, "How can we adapt our onsite programs and activities to the online environment?" For most of us, our entire careers as museum educators have been spent developing and presenting hands-on, in-person experiences. And while a small percentage of our education staff has been dedicated to taking advantage of the expanded reach that online engagement allows, our primary focus was firmly fixed on delivering in-person programs, whether on-site or out in the field. Happily, with the help of our online educators, who showed us that engaging with audiences online can be as rewarding and meaningful as in-person engagement, we've adapted many of our programs and

activities for online delivery. Through these efforts we've been reminded that families, teachers and the general public miss us just as much as we miss them.

Now as we start planning for reopening, new questions are emerging. What parts of our old "normal" will we be able to bring back and when? Key features of our past success—ambassador animals, touchable objects and specimens, in-person programs such as family story time, interactive carts and offsite naturalist-led hikes—all pose transmission risks for staff and visitors alike. How do we find a balance between providing people opportunities to explore first-hand our collections, activities and programs, and following recommended health and safety guidelines? And now that we've put so much time, energy and thought into engaging our audiences online, how can we sustain and build on those successes once the demands of being onsite reemerge?

While the questions of how to move forward seem to change from week to week, one thing has remained constant: our dedication and ability to find ways to share the natural world with our visitors. Whether our audiences join us onsite, offsite or online, I am confident that we'll be able to find the teachable moments in whatever unforeseen events come our way.

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TIPS AND THOUGHTS FOR MUSEUMS IN A COVID WORLD

By Seth Frankel

Studio Tectonic has generated a list of dozens of ways museums, zoos, and other institutions can react to our changing world. These are based upon our experiences in working with wide-ranging institutions as well as conversations with colleagues of various levels of experience and responsibility. We look at these in terms of whether they can be 1) enacted now, 2) upon reopening, or 3) in the long-game. Ideas range from simple and practical on-the-ground changes to systemic challenges that impact core operations and structures.

A searchable database that's organized by time horizon and overall topics is available through the web link.

- Your people are your strongest asset. More staff in exhibits can improve visitor experience, help control crowds and also keep high-touch surfaces clean. People are better at managing complex situations than any technology. Children's museums and science centers are masters at this. All institution types can learn from their methods of engaging with the public.
- Consider visitor flow. Some exhibits have a linear quality already, which helps. If you're currently free-choice, is there a directed flow that could work? Can freestanding exhibits be repositioned to guide visitors' paths?
- Partition your audience into group types. Create a seniors/immunosuppressed block for two to three hours at the start of the day during the week.
- All institutions need to continuously evaluate themselves and their patrons' needs after these experiences. There is no one-size fits all solution.
- Does your current image and media licensing allow for rebroadcast outside of your walls? Read them and be sure you're allowed to move exhibits to virtual places. What/where is a museum if our presence becomes less defined by physical walls?
- Learn from today's informality. Our institutions are often quite prim and proper. Can we have lo-fi recordings from behind the scenes? Video tours done with smartphones? Keep it all under three minutes and give away the good stuff in person and through social media.
- Look to the ways that other types of institutions function.

Zoos can learn from art museums. Children's museums can learn from house museums. Open up dialogues between different types of institutions to learn about each other's best practices.

- What can museums do to service the community beyond the usual? Can being closed on Mondays allow for a farmer's market distribution site? There are many possible re-uses that can help serve the public and keep our institutions vital within our communities.
- Media technologists have lots of solutions to existing touchscreens, buttons and video activation. Don't feel you need to abandon your existing content if a different hardware solution can deliver it more safely.
- Feature your social distancing efforts on the web. Post them at your door. Put them on the back of your bathroom stall doors and above the urinals. Get the word out and remind people in consistent and light-hearted ways.
- Try solutions that may not work for the long haul. Shorten development cycles and drop ones that don't work or won't develop well with tweaks. It's ok to experiment... our public is forgiving if they know we're working on it.
- What in-museum experiences could be offered online for visitors who are leery of being in public spaces? Consider how multimedia experiences could translate from in-person touch screen experiences to web based interactives. Considering adding video material in the exhibit onto your web page. Perhaps it may inspire some financial support from those who are so inclined.
- Observe how people act in the world at large, outside of your institution. How people act in the world indicates what they are comfortable with. Observing behavior in other public spaces can help us track visitor comfort levels too.
- Get to know your community by asking them how you can be most relevant to them. How can you be a stronger source as they cope with isolation and distancing?
- Provide great "giveaways" via web and social media platforms like video-based tutorials (such as simple painting classes and similar activities, or in-house made podcasts featuring museum staff/experts, or deeper

dives into artifacts). There are great snippets that can deliver real content, not just marketing and teasers.

- Share with your visitors how you're documenting and coping with this pandemic. What view might you share about it in the future in how can your visitors feel ownership in how that story is shaped?
- Is the change you're about to implement going to favor

certain audiences (and learning types) and discount others? Best practices still apply. Think through the broader impacts, but don't be paralyzed by it either.

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DESIGNING THE WAIT

By Maria Isabel Garcia

So, we are all waiting. But waiting for what? We really don't know when the vaccine will be available and administered worldwide to make it generally safe to resume museum life. We also don't know in what form or shape our institutions will be when that happens, given the shape-shifting institutional adjustments we are all struggling with now. So, if our core is still able to survive amid this crisis, what do we do while we wait?

What if our institutions can transform our collective view of the "wait"? What if we embrace it as part of the rich journey of science engagement institutions? What if that "lull" can be a "lullaby"?

We are a darn creative bunch in the science engagement field. We are "time warpers" - designers of experiences that have transformed waiting times into discrete and distinct experiences. We do everything with all sorts of tools to make sure our audiences never miss the awesome ways that nature works. Now that the world is focused on the wait, what if we fill our shared wait time with things that they can discover not just to kill time but to help create an even better normal when the pandemic is over?

If there is a [Doomsday clock for countdowns](#), there should be a **Yeyday clock** stretching across that range of time when a vaccine, treatment or even cure would be available. What if we could use each progress or even failure along that journey as an opportunity to engage the public on the many issues that have been revealed by this pandemic: how science works, how vaccines work, that [we ourselves caused this pandemic with our "old normal" ways](#), including the amazing innovations that people are

doing all over the world to wean us from that old normal that betrayed us. I am sure the creative minds in our field will be able to come up with a version of a "clock" that can "bend" and "crush" time into all sorts of weird 'shapes' that will fill us with creative anticipation of the better normal, in place of drudgery or dread.

We are also experts in priming people for the "main attraction". These are opportunities to pump excitement and curiosity and also to empower guests with more information relevant and required to experience the main attraction. If the "main attraction" is the "better normal", then we should really help empower people to co-create that better normal as it will not create itself. We can seize this chance while everyone is listening to make all of us realize that we all caused the pandemic and that the wait, if we spend it transforming our thinking and restoring nature, then eventually arriving at the "dinosaur" or "mammoth" of our wait, will be so much more rewarding because we helped make it happen.

Time can run out on us but what it cannot do is fill it for us. Maybe we can be the muses who will inspire the collective wait. ***

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A WALK THROUGH TIME

By Amy Harris

Towering pillars of wood are burned black, almost to the floor. The charred pillars represent five of the mass extinctions in the history of life on Earth in the brand-new University of Michigan Museum of Natural History's *Evolution: A walk through time* gallery. Narrow bands of unburned wood at the bottom of each pillar stand for the percentage of organisms that survived.

It's shocking to contemplate the devastation that occurred during the mass extinctions, but inspiring to note how life burst forth with diverse abundance after each one. The surviving species that made it through were able to adapt, and eventually to thrive. Is this a helpful metaphor for what the museum field is going through with the COVID-19 pandemic?

We at the new University of Michigan Museum of Natural History certainly experienced the flourishing of the pre-pandemic period. Over the past seven years, we planned and created our dream museum. Housed in the stunning new Biological Sciences Building, the museum spaces wind through the building, blurring the boundaries between public and research areas. Visitors look into research labs, and have conversations with scientists in the Science Forum. Changing exhibits highlight the cutting-edge research of our own U-M researchers and the world-class collections. Student docents and researchers chat with visitors on the gallery floor and in the *Nature* and *Micro Worlds* hands-on public labs.



Entrance atrium of the new University of Michigan Museum of Natural History in Ann Arbor, Michigan. Photo courtesy of University of Michigan Museum of Natural History/ Michelle Andonian

The new museum opened with fanfare in April 2019. A secondary opening took place in November 2019 to unveil the remaining exhibits and experiences. Reviewers were ecstatic. Attendance surged. Museum Store sales shot through the roof. Staff and students were beyond proud. It was a thrill to walk through the museum and see visitors everywhere, enjoying the experiences we had envisioned together, and not without struggle.

And now here we are. The new museum was shuttered less than a year after opening. Everyone is working at home. Zoom meetings keep us connected but exhaust us. We're fighting to keep staff whose positions were in flux when the pandemic hit. We jumped into the virtual realm quickly and are proud of our [Museum@Home](#) offerings, which continue to highlight U-M researchers and students, and we're developing a virtual summer camp, and thinking ahead to virtual school programs for the fall.

Will UMMNH and other museums make it through to blossom on the other side of the pandemic? Only time will tell. We have the advantage of having a parent institution that has successfully weathered difficult economic downturns before. At the same time, we know that as vigorously as we try to support the University's twin missions of teaching and research, and as beloved as our museum may be to our community, we are still at risk if things get bad enough. As in a mass extinction, some familiar museum practices, perhaps even entire institutions, will no longer make sense when the pandemic is over. In this walk through time, we are still in the dark, hoping our human ingenuity and adaptability will help us survive.

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MUSEUMS DURING COVID-19: A LIMINAL SPACE

By Kimberlee Kiehl

The world right now is messy. Our communities right now are messy. The museum world right now is definitely messy. COVID-19 has put all of us right smack in the middle of a liminal space.

First coined in anthropology and applied to various rites of passage, liminal space is the time “in-between,” a time of transitioning from old to new, and, perhaps most important, a place of waiting for what comes next (Van Gennep, 2019). Because in liminal space we don’t necessarily know what will come next and our human brains crave certainty, these spaces can make us feel insecure and not safe. Our desire for certainty makes liminal space hard to navigate and hard to settle into. The uncertainty that comes with liminal space it is often experienced as uncomfortable, confusing and messy. Anthropologists first discussed this idea as the ambiguity and disorientation that happens to people who are in the middle of a rite of passage in their community. In liminal space, participants in the ritual no longer hold the status they had before the rite of passage, but they have not yet reached the status they will hold when the ritual is complete. Since then, this concept has been applied in a wide variety of ways including to physical space, psychological space, and cultural space.

Richard Rohr (Rohr, 1999) describes liminal space this way: “...it is when you have left the tried and true but have not yet been able to replace it with anything else. It is when you are between your old comfort zone and any possible new answer. If you are not trained how to hold anxiety, how to live with ambiguity, how to entrust and wait, you will run....anything to flee this terrible cloud of unknowing.”

While some refer to this space as “crazy space,” liminal space is also a space full of potential. The word itself comes from the Latin word “limen” meaning threshold. A threshold is a place to pause and to think about what comes next. It is a place to reinvent yourself for the next thing coming. It can be a place of rest and of restoration. It is the space where transformation ultimately takes place.

And this space is where we are now living. Museums are closed. We are all trying to find some level of certainty in the chaos, sometimes using the things we know best and just reinventing them in new ways. Museums are running to the internet. They are running to videoconferencing and virtual tours. That reaction may not be our best idea.

Museums are standing at this threshold of a new beginning. It is a time for us to stop and consider who we want to be in the future and what is important to our museums. It is a place to ask what is possible. What should we stop doing? What does our community need from us? What don't they need? What should we start doing? It is a time when we need to leave business as usual behind and stand on the threshold of a new future. But we will only take full advantage of this space if we don't try to rush out of it and make a concerted choice to truly sit with it for a period of time. That doesn't mean we stop everything, but it may mean that we stop some things. It may mean that we don't rush to what seems like obvious answers, but we sit with the questions for a bit and let the rite of passage move forward.

Arnold van Gennep (van Gennep, 2019) has described three phases that occur in liminal spaces as they are applied to rites of passage in groups and individuals. These phases can be applied to where we are now as a field and as individual museums:

- Pre-liminal Phase: during this phase previous practices, traditions, routines and ways of being “die” as the organization has to move out of who we were and how we operated. Museums are examining everything from how we clean the building to how we get people in the building, from experiences to interactions with schools. Some of our old ways of being are going to need to die and it is important that we use this time and space to carefully examine all of them.
- Liminal Phase: during this phase a change in identity takes place. This is the phase most of us are currently living in. Some museums have flung headlong into this phase by moving to digital offerings or “museums at home.” I would caution us to stop and think about whether that is who and what we truly want to be as museums before we throw all our efforts into that basket. We need to use this time to pause and decide what story we want our organizations to be telling going forward.
- Post-liminal Phase: in individual rites of passage this is the phase where the person is reintroduced into society with a new identity, having left the old identity behind. Museums must now look at how we will reemerge as new organizations with new identities rather than simply going forward as the old organization doing the same things in

different ways. How well we navigate this phase may very well determine our futures.

In the anthropology world rites of passage for individuals typically are led by an elder, a “ceremony master”, who is guiding the person toward the new identity. Unlike those liminal spaces, this COVID liminal space we find ourselves in currently does not have this person or group leading us toward a clear future. The future we will arrive at when we move through this liminal space is unknown. As a field we have a chance to re-imagine both our collective and individual futures. To do so will require critical thinking and a systems approach to manage it well. It will require leaders to be the ceremony masters for visitors, employees, and donors.

As we do this work of moving through the liminal phase it is vital that we stop and consider what we want to do, who will do it, and how will we get it done in the new future. This is the time to consider whether our activities are geared toward the short-term survival or the long-term survival of the organization. This is the time to carefully consider changes in staffing and business models. As Steve Snyder stated in a recent conversation I was part of, “For many of us our staff were not designed, but accrued.” This is the time to consider how we will staff for these new organizations we are forming.

This is also the time to carefully examine the stories we have been telling ourselves and either let go of those stories or carefully consider how we really make them true. Have we really moved from nice to necessary? This is the time to consider what our visitors’ experience will be when we do reopen and how close to, or far away from, the typical “expected” experience it will be. If it is too far from the experience that they expect we risk losing our reputations. Are we better not to open at all right now? How will we prepare visitors for this new experience before they get to our museums? This period of time is one to stop and truly think deeply about these, and many other, questions that will be necessary to reinvent our identities.

Finally, we can’t forget that many of our employees are living in a dual liminal space. Some have been laid off or furloughed and are waiting to hear when, or if, they will be called back to work. Others are still employed but are afraid that their jobs may eventually end, or worse yet, that their organization will not survive. At the same time they are all living and coping with the larger liminal space of not knowing what will happen in society. We need to be aware that those who do come back will be holding a lot of feelings. Studies have shown that after a layoff, survivors experienced a 41% decline in job satisfaction, a 36% decline in organizational commitment and a 20% decline

in job performance (Sucher & Gupta, 2018). As we figure out what is next for our museums, we need to hold in the back of our minds that many of us laid people off a full month or two ago. As we start making more permanent decisions about who we will keep and who we need to cut early in the summer some of these laid off employees will be halfway or more through their unemployment payment period. How will we ethically deal with the fact that if we let them go permanently, they are going to be let go with very few weeks of income and no benefits? What can we do to make things right for these employees who have been waiting in the wings to help bring our museums back to life? What do we need to do to make the stories we have been telling about our organizations as good places to work be a true story?

This liminal space is, in many ways, a time of waiting and watching. It is not a time of inaction, but definitely a time of being patient and looking to see what could come next. We would all be well served to stop and as Nancy Levin (Levin, 2020) has said “Honor the space between no longer and not yet.” Let’s use this space to our best advantage so we don’t look back years from now and realize we wasted what could have been a seminal moment in our shared histories.

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HARNESSING THE INCREDIBLE RATE OF CHANGE IN A COVID-19 WORLD

By Paul Kortenaar, PhD

My job as CEO of the Ontario Science Centre in Toronto started on March 30, 2020. As of May 21, I have not yet been inside the Centre, of which I am now the executive director.

I arrived in Toronto from El Paso, Texas, on March 15, and the Science Centre had closed its doors due to COVID-19 on March 13. This out-of-building experience proved a challenge and an opportunity.

Spring Break for Ontario (March Break) usually runs from March 14 to 22, and, in other years, would be the busiest single week of the year for us. Instead, our doors were closed, and our staff adapting to work from home. No scenario for which we had planned anticipated all of our staff working from home for an extended time. We lacked the hardware and software supports and expertise. But our IT department was remarkably flexible and managed to bring the museum “online” quickly and efficiently.

So who are we now?

Sometimes we are so busy just “being” the Ontario Science Centre that there is no time to imagine other ways of doing things. There can be no silver lining to this pandemic, but it did provide an opportunity for us all to stop, think, and begin to make changes to the way that we operate and how we engage with our visitors.

Before COVID-19, our website was primarily a marketing tool to promote visitation to the science centre. We—along with close to every cultural institution in the world—had to re-imagine how a virtual experience might look, and quickly. Initially, this effort became a race to put some kind of content online in order to continuing engaging our audiences. Three months in, we have an opportunity to really think about what it means to create genuine science center content in the virtual world. Are there ways to provide free-choice, open-ended inquiry experiences in the virtual realm? We are making significant progress in this area, but by no means have the answers. What remains important is to continually remind our team that, in the words of a Canadian telco advertising slogan, “the future is friendly.” The virtual Ontario Science Centre is here to stay, even when the current pandemic becomes history, and our building opens fully once again.

And what of the future of the Ontario Science Centre? We do not yet have any indication of when we can reopen or what that might look like—but we can foresee that it will not be like before. Timed ticketing and enhanced cleaning aside, I believe fundamental changes are coming in our sector in the way that we engage through our exhibits and programs. COVID-19 may have shattered every crystal ball, but what we do know is that people are going to be nervous about “hands-on” experiences for some time. How are we, as science centers and children’s museums, going to respond to the concerns of our visitors? How do we empower our visitors to facilitate and mediate their engagement with our existing exhibits (because, let’s face it, who among us has the money to redesign all of our exhibitions?). We have to stop asking, “When will our visitors come back like before COVID-19?” and instead start asking, “Who does our community need us to be in this brave new world?” If we believe we are going to return to the status quo, then we are likely to fail. We have to take this crisis as an opportunity to recalibrate and reimagine ourselves within the spaces that we have meticulously built. How do we provide our visitors with the skills and tools they need to navigate our centers in new, self-determined ways?

What keeps me awake at night? Revenue! (Or, of course, the lack of it). We are fortunate to be an Agency of the Government of Ontario. As such, we have much more flexibility than many in terms of staffing during this pandemic. But moving forward, we face the same challenge as all of our sister organizations: how do we earn revenue during a pandemic and economic downturn? Our answer cannot be to expect even further indulgence from the public purse (which is already showing strain). It must be to develop new lines of business. In our case, that means finding ways to help other branches of the government: education, seniors and accessibility, environment, and universities and training where we can provide services in both the virtual world and in the physical space of our center, now and into the future. As huge segments of society begin to reinvent themselves, we know we must do the same. We claim to provide children and families with the skills of innovation that they require to become citizens of the twenty-first century. Surely we must demonstrate the same innovation ourselves. I am fortunate that my role as CEO does not require me to answer these questions. It is my role instead to create the conditions necessary for our incredibly talent-

ed team to be able to innovate our response and make sure that we, and our community, know that the future is indeed friendly.

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WHAT'S LOST? A CONSULTANT SHELTERED IN PLACE

By Amparo Leyman Pino

The most common refrain I hear from family, friends and colleagues since the recommendations for physical distancing turned into shelter-in-place are "I am tired of seeing myself on the screen" or "ugh 2D meetings are so tiring." As a consultant, I was already accustomed to remote video meetings. I have the privilege to work with institutions across different latitudes and time zones, and I am a member of two organizations whose constituency is spread either nationwide or internationally. My work - both paid and volunteer - happens 80% behind my screen, interacting professionally and socially from home, or wherever I am sitting. My office is my laptop and my cloud drive.

Even as someone well accustomed to working and interacting remotely, I am finding shelter in place quite challenging. For me, it's not that what we are doing is new – it's that I miss what we are not doing.

Personal level. The hardest thing for me is that I am unable to go out to have a social life, or to invite my friends to disrupt my home headquarters and transform them into party central. Yes, we have virtual lunches, coffee breaks, and even birthday parties. As an immigrant, I have always used remote connections to be with my family when it is not possible to visit them, but it was never our only way of connecting. It's not that I don't enjoy virtual gatherings, it's that they are just not enough, it is not the same. The loss of being together is hard.

Professional level. The hardest thing for me is that most of my projects, most of the vital and important work I get

to do, is on hold. My work focuses on creating intercultural content and on strategies for diversity and inclusion, and on supporting meaning-making for all audiences. I am used to working closely with institutions and their communities to make a difference. With my projects on hold, I fear this important work is being left undone. This is where my heart mourns, and longs for this pandemic to cease. Will we lose what momentum we had in making progress on equity and inclusion? Will the collaborations that allow new ideas to emerge cease? For how long?

To try to do what I can, I am looking for ways to support institutions and communities to survive this unprecedented situation. I am offering two-hour pro-bono sessions to support their staff and initiatives. Together we are co-creating strategies to connect and continue serving communities as much as possible. This is a time to be proactive and tackle the gaps that unfortunately are getting bigger and bigger. I just hope to see the resources come back before it's too late. With few resources to support this work, I have to wonder how we can be successful. I am ready to think, act and collaborate, from my headquarters, and behind my webcam.

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LESSONS FROM SARS AND A STRIKE: SUMMARY AFTER AAM WEBINAR

By Jennifer Martin, Lesley Lewis & Julie Bowen

In February, 2003 the world was rocked by a respiratory virus that threatened to spread, unconfined, into a full pandemic. It hit hardest in China, Hong Kong, Taiwan, Singapore and Toronto, Canada. That virus was SARS, and by March 26th a state of emergency was declared in Toronto.

The experiences of the Ontario Science Centre (OSC), other museums in the city, and the broader culture sector were the nucleus of a webinar with the American Alliance of Museums in mid-April this year, almost 20 years later.

There are huge questions facing our sector, and while the scale and overall impact of the novel Coronavirus can't compare with that of SARS 2003, there are many questions raised then that have resonance to our profession now. How do we get our audiences back, and back safely? How will our staff respond to the break in operations, in their salaries, in their team work? How do we restart our museums? And critically to the ability to fulfill our mission in the future, how do we recover financially?

First, let's cover the general context in 2003. At the time the OSC had a budget of \$30M (CAD) of which approximately 45% was supported by an annual operating grant from the provincial government. Annual attendance was 1,000,000 supported by a staff of 350 FTE. The original facility opened in 1969 and was at the beginning of a \$47M capital renewal program (2003-2006) that was focused on innovation, open-ended visitor experiences, and current science responsiveness.

When the state of emergency was declared in Toronto, the OSC experienced an immediate reduction in attendance. It must be noted that a significant difference between SARS and the 2020 pandemic is that no cultural institutions in Toronto were closed in 2003. Schools remained opened, business remained opened, and yet the impact was vast. A \$2B economic impact hit the province; Toronto was seen as an unsafe place to visit, and tourists and convention visitors cancelled their plans immediately. In all over 20,000 people were quarantined, over 13,000 lost their jobs particularly in the tourism and hospitality industry.

The people of Toronto also experienced an increase in racism and discrimination as fear of the virus caused some to lash out at members of Asian communities, particularly

owners of businesses in the three significant Chinatowns in Toronto. Overall the epidemic lasted 14 weeks, with two specific waves of infection – February to April through public transmission paths and, May to June isolated within the healthcare system. In total over 40 people died, a number which looks incredibly small by today's pandemic statistics, however the mortality rate has been calculated at over 13% in 2003, compared to an approximate 5.9% in the US (ref. Johns Hopkins University of Medicine, April 29, 2020 based on current testing capacities).

OSC ATTENDANCE IMPACT – REMEMBER THE SCIENCE CENTRE NEVER CLOSED:

- April – June 2003 -44%
relative to year-over-year averages, and budget
- July – September -29%¹
- October – December +19%
- January – March +8% (2004)

Before moving further into the lessons learned and experience gained in 2003, we also noted a correlation of behaviours and museum experiences related to a public service strike in the spring of 2002, which included the unionized employees of the OSC, closed the science centre completely, and lasted over 8 weeks. While the SARS epidemic did not cause the closure of the cultural institutions in Toronto, and ended fairly abruptly in the fall of 2003, the strike mirrors the uncertainty of timing, and significant and often negative disruption of working relationships that we may be experiencing now.

HOW DO WE REASSURE OUR STAFF?

By now we all have a good understanding of the implications to personal safety caused by this virus. In 2003 this wasn't seen as such an issue, likely due to the relatively rapid containment of the epidemic. However, the implications on mental health and social safety were abundant after the strike in 2002. Many staff did not want to strike, and found themselves financially stressed. Many were angry, depressed, uncomfortable with returning after a divisive period. Management had worked hard to maintain positive relations during the strike, and we welcomed the team back with breakfast and our thanks.

However, relationships needed to be rebuilt, and managers had to be wary of just jumping back into previous patterns.

The OSC stayed closed for 3 days to allow re-acclimation of the team. We talked, we listened, and we carefully inquired as to how individuals were faring. Also, while everyone knew what to do on a daily basis, re-starting the science centre was not 'normal' activity. It was important to treat 're-start' like a small project and reviewing the steps that we needed to take before welcoming back our visitors.

Fast forward to 2020 and note that this also a time to re-think some of your regular processes, which can be exciting to some and cause deep fear in others. Don't miss this opportunity, but equally don't spring a whole new regime on your teams.

Remember that some people continued to be paid during this period, while others suffered significant financial hardship. If your museum has the means, consider offering an advance of pay checks to help people catch up, while setting a clear payback period (at OSC we did this with a 4 month return to normal). Managers generally need to update/remember their HR policies and be responsive.

Finally, for leaders and managers it is important to remember that many of you have been actively working from home. Many of your staff have not, so while your tempo (stressed as it is) has been trying to keep pace with adjusting budgets, timelines, exhibition schedules etc., those members of your staff who have been completely out-of-work will need time to catch up. Be patient, be gentle, be empathetic, and be open to the grieving that may be invisible to most. There has perhaps never been a more important time to put mental health first.

HOW DO WE GET OUR AUDIENCES BACK?

First, how do we help our visitors know that we are safe to visit when there is great concern about the high-touch nature of many of our museums and science centres. At the OSC we typically did cleaning early in the morning, then again after hours. During SARS we greatly amplified the presence of our exhibit cleaning, and even diverted exhibit maintenance staff to more time visibly cleaning during operating hours. Hand sanitizers were not "a thing" in 2003, but we found a supplier and put them out. We also brought on portable hand-wash stations. Also for the longer term, we made changes to exhibition renewal projects and added plumbed-in hand wash stations in exhibit galleries.

From an audience perspective we saw members numbers recover first. Then, due to timing of a sense of recovery in the city overall by September, we actually saw a resurgence of school visits that pushed our attendance above forecast, even for a typical autumn period. We suspect

that teachers had a desire to help their students normalize that fall, and may have had budget left over from field trips not taken in the spring.

Family attendance continued to rebuild through the fall. However, tourism attendance did not really recover in Toronto for at least three years.

In 2003 we didn't have "social distancing" to manage, nor were there masks being worn. As we welcome our audiences back in 2020 these will be major factors in our museums. Opening up exhibit spaces by removing some exhibits may actually work in our favour. Partnering with other organizations to co-brand masks for guests who come without may help buoy the community recovery overall. We will need to be highly responsive as social norms change and adjust over the next year.

HOW DO WE RECOVER FINANCIALLY?

There is so much variability in our field, that this is a tough question to answer succinctly. However, a key factor for recovery in Toronto was the founding of Toront03 Alliance. This group, of which the OSC CEO was a board member, worked across cultural industries, hospitality and restaurants to develop collaborations like never before. Entertainment packages were offered that included tickets for the performing arts/theatre, night at a downtown hotel or a dinner for two at a restaurant, plus discounted tickets for the science centre, Royal Ontario Museum or Art Gallery of Ontario.

It should be noted that the restaurant business in all our cities is being seriously impacted by this pandemic too, and potential partnerships that cross all visitor-engagement sectors may be very helpful to restoring confidence in our communities. Tourists may or may not be an important factor in your business model, but certainly the resilience of your local community will be of paramount importance to the recovery of your museum.

Additionally, look for smaller players in our region. Those non-profits who may actually need your help to survive this. The diversity of our society depends on more than the just big players surviving.

Finally, look to those unique skills and assets that you have to enhance your museum's relevance during this period of recovery. We know that the public still puts trust in our work as museums. Science museums will be important as the pandemic slowly works through, especially if a second or third wave of infection develops next fall or winter. History museums add context to our present situation from the past. Art museums bring emotion and response to the stress and uncertainty we may continue to face. Children's museums need to continue to be a safe place for play.

Overall, be responsive. Continue to find your unique niche on social media, and work with others to share common language and messages. Try new things or modifications. Quick signs, tests for communication at your entrance, might help people know what you've done to prepare for them. Listen to the first audiences coming back, ask them how they are feeling and behaving, and adjust accordingly. This is such a new situation for all of us, and we learn best by leaning together.

FOOTNOTE

1. this period included the 5-day blackout when power was lost throughout Ontario, Ohio and most of the eastern states of the US

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FROM COMMUNITY ARCHIVES TO PERSONAL COLLECTING IN THE ERA OF COVID-19

By Denise L. McIver

PREFACE

In early March 2020 –what turned out to be just days before the shutdown—at a time that now seems eons ago, I was part of a panel on Community Archiving at the annual conference of the California Association of Museum (CAM).

The panel, titled OurChives, featured a discussion of why it is important to create strategies and spaces to preserve marginalized and ephemeral narratives. Participants from Self-Help Graphics, the Los Angeles County Museum of Art, The Huntington Gardens and the California African American Museum (CAAM) discussed several projects we were currently working on at our respective organizations and provided participants with ideas as how to launch their own projects at their institutions. We all stressed the power of collaborations and resource sharing, which helps to ensure the success of a community archive project.

I shared a joint project we at CAAM are doing with Pepperdine University to build a community archive focusing on the history of South Central LA. This project will invite

community members to tell their stories and enable us to create public programming in support of the overall project, and it was one I was most excited about. But then everything changed; we were suddenly under attack by an enemy that is invisible, unknowable and deadly, a pandemic. In person work stopped, with no clarity on when projects involving physical documents and in person contact may be able to begin again.

COLLECTING DURING THE CRISIS

Collecting during the era of Covid is important for the future. Unfortunately, in the absence of resources and capacity to do all that our museums and staff might wish to do, developing community collecting projects is challenging. Several larger museums in LA are collecting digitally (e.g. The Autry <https://theautry.org/research/blog/collecting-community-history-initiative-west-during-covid-19>), but it was my sense that they weren't reaching into my neighborhood, or to communities that didn't already feel connected to them.

Although collecting Covid was not an urgent priority for my own institution, I kept seeing unique and extraordinary signs of the times on my morning walks around my neighborhood. I was often moved to snap photos on my phone to share with friends, and without even meaning to, I began creating an archive of photographs of these signs. This has now become a more formal personal project, and I have begun more actively searching for material that marks this moment in time.

During my own collecting (and I search out text-based materials, primarily), I have found an impassioned love letter written with a bold Sharpie, various birthday cards in which friends and relations articulated their desire to be together but how impossible it is during the Covid crisis – but still wishing the recipient Happy Birthday.

I also came across a blue and white LA Dept. of Transportation sign at a crosswalk, warning pedestrians NOT to press the button to request the Walk sign.

While out, I'm also taking photographs of signs in the windows of local merchants currently closed due to the Covid lockdown. Eventually, when they are no longer needed, I hope to ask these merchants for the actual sign. I continue to share what I find with my friends, and I see others doing the same.

The almost inadvertent, casual collecting of visual images to share on social media or just to keep, could easily be turned into valuable archives documenting these times. All they need to be valuable for the future is to be documented.

ADVICE FOR MAKING YOUR OWN ARCHIVE

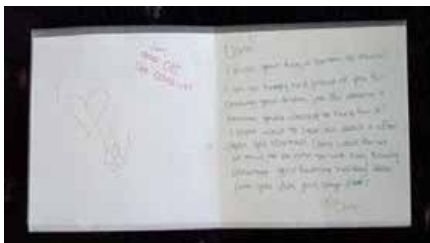
In creating your own 'Covid Collection', please make certain that you add metadata to the items you collect. This is how researchers and scholars conduct searches. Some information you might include is the date, location, name of the business, the time you actually shot the image as well as a short description of why you decided to capture it. The reason this is critical is so that those coming behind will have the meaningful information for their ongoing research.

It's relatively easy – a simple Excel spreadsheet could be created using the metadata fields (15 in all) from Dublin Core (see <https://guides.library.ucsc.edu/c.php?g=618773&p=4306386>).

Signs of Covid are all around us, and before life as we now know it returns to some semblance of normalcy, now is the time to collect. There will certainly be demand for digital and physical archives from this historic period. It's up to each of us to document what is going on in our own neighborhoods.

This is a moment in time. And no one can predict how things will shake out or how long until our lives right themselves. So now is the time for you to contribute to the body of human knowledge.

Denise L. Mc Iver is the Research Librarian at the California African American Museum. She holds Master's Degrees in Arts Management from Claremont Graduate University and in Information Sciences from St. John's University in New York. She can be reached at dmciver@caamuseum.org.



Materials collected by the author during the crisis

NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY COMMUNITY SCIENCE – GROUP NORMS DURING THE PANDEMIC

Authors: *In alphabetical order, as there was no lead author.*

Maiz Connolly, Korinna Domingo, Lila Higgins, Amy Jaecker-Jones, Jessie Jennewein, Miguel Ordeñana, Michelle Race, Richard Smart.

INTRODUCTION

In August 2018, the Community Science team at the Natural History Museum of Los Angeles County began to craft a set of group norms. Our intent was to create a living document, with a set of acknowledgements and agreements, that would help our team to engage in the most productive and equitable communication possible. Initially, we adapted norms that our staff member, Miguel Ordeñana, learned while attending the [iPAGE](#) program at the Science Museum of Minnesota. Every member of our staff helped with writing, editing, and discussing our new norms until a consensus was reached. Through this process, we were able to formulate a unique set of norms tailored specifically for our group. Since their creation, our norms have been recited aloud by a team member at the beginning of every weekly team meeting. We then open the discussion to comments about the norms that particularly struck us as meaningful for that week.

In March 2020, like many other museums across the country, we closed our doors to the public and began to work from home. Rather, we began to try to continue our work from home while a global pandemic was unfolding around us. As we recited the norms in our now-virtual team meetings, many of them no longer resonated. To keep them relevant, we once again worked together to rewrite them—to modify and create new norms for our now remote work culture. Our hope was that this new version of our norms would better reflect our thoughts, feelings, and abilities to work during a global pandemic. So far, we have found them to be helpful in grounding us and connecting us to some of the universal experiences of working in this time of great uncertainty.

NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY COMMUNITY SCIENCE – GROUP NORMS DURING THE PANDEMIC

The goal of the group norms is to provide our team with some written guidelines that help instill a mutually accepted communication style and work environment for our office. The norms help us to create an inclusive and comfortable environment, which will facilitate efficient, respectful,

and productive communication. Finally, the norms act as a refresher before a meeting and as a reminder so we can right ourselves if we veer off path.

WORK CULTURE—HOW WE APPROACH OUR WORK DURING THE PANDEMIC

- We are all currently experiencing some level of discomfort.
- We need each other.
- We encourage cooperation over comparison—individually, departmentally, and institutionally.
- We know that circumstances change quickly during a pandemic. We give ourselves space and time to adapt to those changes.
- We acknowledge that we are now exploring the unknown.
- We embrace diversity, including a diversity of opinions and, as always, strive to reach diverse participants.
- We acknowledge that we are all trying to find a new work-life balance, and that there is no reasonable timeline or deadline to adjust, since our situation is unprecedented and continues to change.
- We aim for good, or even for just showing up, when excellence is currently an impossible standard.
- We acknowledge that our levels of productivity will be compromised and inconsistent.
- We acknowledge that we often feel external pressure to produce, and work to keep this pressure in perspective and not pass it along.
- We understand that feelings exacerbated by the pandemic, including uncertainty, loneliness, helplessness, frustration, impatience, fear, anxiety, and sorrow, can and do affect the way we work.
- We acknowledge that we feel stress and understand that it comes from caring deeply about important things. We strive to shift our mindset about stress in order to focus our thoughts on the important values behind our stress.
- We acknowledge that there is no roadmap for planning community science work, including programming during a pandemic. Our messaging and measures for success will be different during this time.
- We acknowledge that connecting digitally leads to digital burnout.

COMMUNICATION—HOW WE INTERACT WITH EACH OTHER PROFESSIONALLY

- We will practice empathy during conflict, with a goal of deeper understanding. We practice empathy even if we disagree or don't understand.
- We will practice patience with ourselves and others as we cope with how the pandemic affects our work, and remain supportive even when others' coping strategies and productivity differ from our own.
- We strive to be empathetic to the individual experiences of others, as our personal lives have become more inter mixed with our professional lives.
- We will practice humility and vulnerability about not knowing. We are open and receptive to someone else's humility and vulnerability.
- We listen with the possibility of being changed and speak with the promise of being heard.
- We are present and our authentic selves. We are gentle with ourselves knowing that being present during a pandemic is sometimes challenging.

- We will aim to communicate to the best of our abilities and share barriers we are experiencing for our work, while being mindful of others we are communicating with.
- We have the right to ask for help and/or support and the duty to assist.
- We acknowledge the contributions of each team member.

The Community Science Team and the Natural History Museum of Los Angeles County facilitates community science, participatory research and collaboration among audiences across southern California and beyond with scientists, educators and other organizations. <https://nhm.org/community-science-nhm>. They can be reached at nature@nhm.org follow them on Instagram at [@natureinLA](https://www.instagram.com/natureinLA).

“MY PANDEMIC PROJECT”

By Paul Orselli

When the restrictions and precautions surrounding the COVID-19 pandemic took hold on Long Island, where my family and I live, it immediately became apparent that we were entering strange new territory. The notion of “working from home” and having meetings and conferences remotely, was not that different from much of my usual consulting workflow, but two other things soon became apparent.

First, as every museum conference I was scheduled to speak at or attend was canceled or postponed, the notion of “social distancing” on a professional level became very real, very quickly. I missed the opportunity of seeing museum friends and colleagues in-person!

Secondly, and related to professional social distancing, I missed the back-and-forth of sharing and learning from each other – which strikes me as one of the underlying strengths of the museum field that sets it apart from many other professions.

So, what to do? Well, what I did was to take up with new

vigor the idea of “Museum FAQ” videos (FAQ is tech-speak for “Frequently Asked Questions”) that, quite honestly, I had started a while ago but had left aside. Now I started contacting museum colleagues to find out if they would be willing to have a conversation with me via Zoom (of course!) about a museum topic that would draw upon their personal experience and expertise.

To my delight (and relief!) folks readily agreed, and now I have started to build up a freely available library of videos on my POW! YouTube channel < bit.ly/OrselliYouTube > that covers a wide range of topics from Museum Management to Exhibit Design to Science Communication. Even though the videos are being recorded during the COVID-19 pandemic, the topics covered, and tips and techniques shared, are truly “evergreen” in the sense that they will still provide interesting and useful information for, hopefully, years to come.

While I continue to record Museum FAQ videos, three videos, in particular, stand out for me.

Christian Greer, President & CEO of the Michigan Science Center, brought forward a thoughtful (and timely!) discussion about managing in times of transition < <https://youtu.be/Jm84LrJl5tQ> > I was struck by how eloquently Christian shared tactics for balancing the foundation of Mission with the flexibility and creativity needed for turbulent times.

On a completely different topic, Amparo Leyman Pino shared successful ways she has used language as an interpretive tool in museums. < https://youtu.be/oSTnqal_KTc > Amparo moved beyond the more familiar multilingual labels to the ideas of blended language and language neutral environments.

Lastly, exhibit designer Margaret Middleton shared a fun

and informative way to think about creating more inclusive museums by walking us through how to plan for better infant care and feeding areas as a model for the process. < <https://youtu.be/Xyw-uDROm90> >

I hope you'll click on over to the POW! YouTube channel to view some Museum FAQ videos for yourself – and, better yet, please let me know if there are new topics that we could have a Zoom conversation about together to share with our museum colleagues!

Paul Orselli is Chief Instigator at POW! (Paul Orselli Workshop, Inc.). He can be reached at paul@orselli.com

RECOVERY OF A SCIENCE CENTRE AFTER ECONOMIC CRISIS

By Per-Edvin Persson

INTRODUCTION

Everybody in the science centre field is currently busy planning and providing digital offerings and discussing how the Covid 19 crisis will impact the field in the future. How will the public react to hands-on science experiments in the post Covid 19 world? What changes in offerings and policies will be necessary? And above all, how long will it take before visitor numbers reach pre Covid 19 levels? I will look at a case of economic depressions from the past that may help us understand what lies ahead. Of course, an economic depression is not the same a pandemic, but the economic consequences of Covid 19 are similar. Recovering from Covid 19 may contain additional elements that are difficult to predict at this stage.

HISTORICAL LESSONS FROM TWO DEPRESSIONS: CASE STUDY HEUREKA

Finland suffered a severe national depression in 1991-1992 – the GDP in 1991 decreased 7.1% from the previous year and the social effects were long-lasting and harsh. The current Covid 19 crisis is producing almost as dramatic effects on the Finnish economy. Heureka, the Finnish Science Centre opened its doors in 1989 and the first three years of operation were great, partly because we brought in the first dinosaur exhibition in 1991. However, the drop in annual attendance from 1991 to 1992 was 25% with dire

consequences for the institution.

Let's look a bit closer at the Heureka attendance numbers in 1991-1994. I have chosen the time period September to August to exclude the dinosaur effect in early 1991 and to adjust to the onset of the depression.

Heureka mean annual attendance 1990-1999	283,107
September 1991 – August 1992	212,757
September 1992 – August 1993	257,682
September 1993 – August 1994	281,682

The first year the depression hit attendance was down 25%, the second year it was still 9% below average and only in the third year were "normal" numbers attained. Based on this experience, recovery took three years. However, note that the crisis was purely economic, there were no restrictions on people's movements etc. If reopening after Covid 19 happens in stages restricting attendance levels, the time of recovery will probably be correspondingly longer.

The world wide depression in 2008-2010 did not affect Heureka as badly as the 1991-1992 depression. Looking again at figures from September through August (Lehman Bros filed for bankruptcy on September 15, 2008) the fig-

ures look like this:

Heureka mean annual attendance 2000-2009	262,994
September 2008 – August 2009	243,355
September 2009 – August 2010	241,544

In the third year of depression the attendance numbers soared, because we brought in the dinosaurs again. In fact, every time Heureka brought in a robotic dinosaur exhibition in the period 1995-2010 attendance figures increased by 31-55% compared to the preceding year!

CONCLUSION

The Heureka post-2008 experience points to a possibility of speeding up the recovery process by taking in a block

buster exhibition in the years immediately after the crisis. In the Covid 19 world such an exhibition should probably be fairly non-tactile compared to usual science centre exhibitions. Again, if paleontology at all figures in your institutional identity, a robotic dinosaur exhibition is an obvious choice.

Professor Per-Edvin Persson was Director of Heureka in 1991-2013 and is now an independent consultant. He can be reached at pelle@peredvinperssonconsulting.com.

TAKING SCIENCE TO THE SCHOOLS OF NEW ZEALAND

By Neville Petrie

Life goes on all around us. Nature continues unabated while humans have their lives thrown upside down. Here in NZ the tides still flows in and out of the harbour below our home, seasons are changing, the nights are getting colder and the days shorter. Eight weeks of lockdown is about to finish and an element of a new normality will begin. There will still be social spacing, larger gaps between tables in restaurants and no gatherings with more than 10 people. Hairdressers will be wearing masks and gloves as they cut your hair and there will be no counter food in cafes, so food is ordered at your table and will be delivered by a single waiter to you. This will be the norm in New Zealand for the next few weeks, all going well.

In the blink of an eye things changed radically and Covid 19 has created major changes to everyone's lives and the old normal is still some way off. Our Prime Minister talks about the team of 5 million (the population of NZ) working together to defeat Covid 19 and to date we have done a really good job.

Change can be good as it can make us think outside the box. In 2011 after the third major earthquake hit Christchurch, Science Alive was completely destroyed and our "normal" was thrown out the window. We were faced with the challenge of finding ways to remain relevant to our community. At a time of major change it is amazing how an organisation can adapt and look at different ways to do things. Never underestimate your staff. It was amazing how the staff of Science Alive worked together, shared

ideas and created a new normal where programmes and activities were developed for outreach to schools, holiday programmes, preschools, libraries and families.

Since the board of Science Alive closed the operation after their disastrous financial decisions, there has been one organisation that has stood out here in NZ. Over the last 6 years, The House of Science has gone from strength to strength and is expanding through New Zealand's main centres.

House of Science enables and supports New Zealanders' to engage with science and participate actively in the world they live in. They provide primary and intermediate schools with relevant and comprehensive science resources, inspiring young New Zealanders' interest and understanding of science through relevant learning experiences. Their resource kits are delivered, collected and maintained by teams of volunteers in their regional branches, servicing their member schools. They are all about empowering teachers because well resourced, confident teachers deliver great science lessons which results in engaged students.

Their resource kits are hands-on, fun and relevant to the big issues New Zealand is facing now and into the future. Not only that, they are completely bi-lingual (Te Reo Maori) which means no student is excluded.

Their science resource kits cover a vast range of relevant topics and include at least 5 hands-on experiments, cater-



Figure 1: Acid and base equipment



Figure 2: Named resource kits

ing for Year 1-8 students. They are easy to use and everything a teacher needs is in the kit, including all consumables. It has bi-lingual student instructions (Te Reo Māori) and has a teacher manual. Kits are fully aligned with the NZ curriculum and many reflect current National Science research. These kits are booked for one week at a time and are delivered to/collected from member schools.

New kits are developed with the help of generous sponsorship from science organisations here in New Zealand like the MacDiarmid institute, ESR and AgResearch etc. Local sponsorship allows the regional House of Science



Figure 3: Resource kits ready to go out to school at the beginning of the school year

branches to purchase a copy of a kit for their library and pays for the maintenance, delivery and upkeep of the kit. Each region has their own 'library' of science resource kits and not all regions have a copy of every kit. Resource kits are developed by House of Science NZ staff with careful consideration of the NZ curriculum and many kits have significant input from NZ scientists and reflect current research.

House of Science now has 10 regional centres through NZ with over 250 member schools. It has 34 themed resource kits (and growing) with a total of over 300 kits available around the country. Over 100 resource kits are delivered and collected from member schools every week.

House of Science is a franchise. As new centres look to establish, head office provides all the materials that are required to set up the operations from advice on establishing a charitable status to providing a marketing plan. New regional centres are able to purchase resource kits that they feel are relevant to the schools in their region.

During the Covid 19 lockdown, House of Science provided weekly newsletters with updates on the lockdown as well as home based activities for children and a section of activities for teachers.

As we move back to a "normal" I think this mode of operation is a great way of engaging and exciting children about science. It provides the support that many teachers need to build their confidence in delivering science to their students. At a time where it is not easy to get to the science centre or museum, this form of Outreach is a way that enables the delivery of science to our audiences and it keeps us relevant. It also enables centres to engage

with new sponsors without them requiring large outlay of sponsorship funding and in return they receive valuable profiling through materials in the kits. It is an opportunity to establish new collaborations with other organisations in their community so at a time of adversity think outside the box and look at other avenues to engage audiences to develop their understanding of Science.

Neville Petrie is the Director of Interactive Exhibition Specialists, Christchurch, New Zealand
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PUBLIC AND PARTICIPATORY SCIENCE

By Tim Ritchie

I have never seen a time when science was as public and participatory as it is now. Citizen scientists are roaming the world, wearing masks, maintaining social distance, washing their hands, protecting others. Others who have a different view of science are equally public, threatening store attendants, challenging public health officials, and mocking governors who are trying to enforce science-based restrictions on business and personal liberty. Everyone can find something on the web to justify their actions and support what they already believe.

What a moment for science centers! At a time when our earned revenue has dried up, doors are closed and personnel is depleted, the world is offering us a gift: the chance to serve as platforms for public participatory science. In the context of the Covid-19 crisis, the world does not need our self-produced content. Public health officials, academic institutions and industry have a fire hydrant full of trustworthy content. It does not even require our physical places right now. We can reach the world digitally with a minimum of expense and with a maximum of reach. It needs our authority, our imprimatur, our capacity to convene and our ability to inspire.

I have been encouraged by the willingness of the institution I serve – The Museum of Science, Boston – to make science public and participatory. In the early days of the spread of the virus, we convened a community-wide town hall on how to respond to the virus. Hundreds attended on line. The presenters were public health officials and public hospital physicians. Since then, we have hosted a number of on-line public forums that have harnessed the smarts of our local bio-tech community. Soon we will convene a pathogen-response panel from Harvard to speak to our community and the nation. In each case the goal has been to harness community resources to engage the general

public. It has been to raise the profile of science as a tool the community can use for problem-solving.

For too long, science has becoming an increasingly private enterprise. It has become something done by people who get paid to do science in labs and universities and businesses. It is increasingly not a priority of our national government. It is an optional hobby for the general public, like jogging or music. And as science has become private and optional, it has also become relative and dispensable.

Our society is paying a terrible price for the privatization of science. Thousands upon thousands of people have died needlessly as a result. We are losing the ability to even think about, let alone debate, science. There is increasingly less shared ground to discuss what reality requires. Reality, in an internet age, is what we say it is.

Again I say: what a moment for science centers! We can offer our centers – physically and digitally – to the trustworthy science folk in our communities to convene public conversations about what reality is, what it requires, and what it rewards. We can become platforms for citizen scientists to find each other, share their work, and speak to the world. We can help create a broad-based celebration of science, and with that breathe life into the visions people hold for creating a world that is humane, sustainable and evidence-based. If we do that, we will create something we all need desperately now: a reminder of why we matter – why we are relevant – to our rapidly changing and increasingly anxious world.

Tim Ritchie is President, Museum of Science
www.mos.org. You can follow him on Twitter: [@timritchieMOS](https://twitter.com/timritchieMOS).

COLLECTING AND UNIFYING UNDER A PANDEMIC: COVID-19

By Tory L. Schendel Cox

HOW CAN WE INTERPRET AN INVISIBLE ENEMY?

As a 21st century curator, part of my job is to “collect” history in the making. COVID-19, the global pandemic that unexpectedly impacted our communities, is such history. With the closures of businesses, schools, and universities, almost every state in the union has issued a “stay-at-home” order instructing residents to shelter in place and self-quarantine. *What does this mean? What does this look like? How is our community coping?* These were some of the questions circulating in my mind as I tried to conceptualize what was occurring. My community expects exhibitions and programming to interpret the world around them through the usage of tangible objects, so I started thinking about how to help make sense of what is going on.

Although I have been in this profession for a decade, I have never dealt with anything like the current situation. However, in 2018, I had the opportunity to learn about “crisis collecting” during my training at Johns Hopkins University. Crisis collecting - when the museum takes the initiative to document history in the making – has become increasingly important in the past decade or so. The Boston Marathon Bombing, 9/11, the Miami Pulse Shooting, and other tragedies are a few examples in which our colleagues collected materials and stories to create exhibitions for reflection, memorializing, and to better understand what occurred.

It is hard to compare COVID-19 to previous tragedies. Since COVID-19 is a virus, and the public health response has been to close most physical businesses and cultural organizations, museums cannot yet collect any physical objects. First, museums are mostly closed, most of us are working from home (if we are still working at all). Second, there is currently fear that any objects we might want to collect could be contaminated themselves, and would need isolation or special treatment before they could even be handled. And even if we could collect physical objects, they could not be seen in person by anyone since museums are almost all closed.

Due to this, we must utilize multimedia platforms, at least for now. During the first week of isolation, I started an online campaign to collect pictures and testimonies of people living in quarantine through Facebook, Instagram, and emails. As interest grew, I included phone calls and text messages for accessibility purposes. My idea was to

have local pictorial testimonies, but as this exhibition grew, submissions began to come in from across the country and even abroad.

As the responses poured in, it was both touching and enlightening to learn how people were coping. From the newly unemployed to high-risk individuals (whether they have an autoimmune disease or are in the 50+ age group)



Figure 1: Moses Meingati is a Kenyan doctor helping his people



Figure 2: Sam Hyde, Director of Community Relations, Salvation Army, packs boxes to feed Hoosier families



LARRY HANSON
COVID-19 Patient
Part 1 of 4

I'd been in IU Health Bloomington hospital for almost two weeks. On April 17, a nurse came to pick me up in a wheelchair so I could be discharged. As we left my hospital room to enter the COVID-19 Isolation Unit lobby, it was a bit surreal.

Everything was draped in large, translucent plastic sheets, taped shut with dark blue duct tape, and it was very loud due to negative airflow blowers blasting away. As I neared the counter to sign my release form, the nurse picked up a bell and started ringing it loudly. Suddenly, ghost-like figures draped in protective gear came out from behind the plastic and began cheering and applauding me. It was an emotional moment for all of us, because we realized I was one of the few to actually leave the hospital alive after having had COVID-19. It's not an exciting story, but I know many are curious what it's like to be sick with the coronavirus.

I'd started working from home selling Brown County Democrat ads around March 15, when the owners OK'd any employee who could work from home to do so. As each day in quarantine passed, I felt very safe, especially since I was having no contact with anyone. I only ventured out twice, once to pick up some takeout food and then to buy some groceries. My girlfriend Deadra got sick first, and on a Friday, March 20, called in to her workplace to take a sick day.
[continued]

Figure 3: Larry Hanson, COVID-19 survivor

and even some people lucky enough to feel relatively unaffected, these responses and images have been digitized and are available in a virtual exhibition at <https://emuseum.org/changing-exhibitions/2020/4/17/life-in-isolation-the-coronavirus>.

As a starting point, I started a miniseries called *"Cultural Insights: Interviews in the Creative Sector."* It came together organically. Originally, it was supposed to be a "feel good" series where creatives talked about their work. Nonetheless, how can one talk about their work without mentioning COVID-19? From there, it turned into a platform where creatives discuss who they are and highlight how they triumph through this hardship.

When we reopen our museum, this content will serve as a physical exhibition in the John Streetman Alcove at the Evansville Museum of Arts, History & Science. From the collected stories and videos, I am partnering with the Indiana Fashion Foundation and StitchWorks, who was commissioned to create 2,500 isolation gowns, to receive an isolation gown, gloves, and mask for display. Also, coworker Thomas Lonnberg, Curator of History, fostered partnerships with local hospitals and businesses to receive

COVID-19 related artifacts such as posters, buttons, stickers, and teeshirts for the exhibition. The digital and physical objects will become a permanent part of the museums collections.

This project, and this time in general, has made me feel more social and in some ways more connected to my community now than ever before. I have at least two Zoom calls per day with creatives on a national platform. In addition to collecting for my museum, I currently serve on a COVID-19 subcommittee for the American Alliance of Museum's Curators Committee and am working with over forty curators and academics to help contribute content for the, now international, repository, "A Journal through the Plague Year: An Archive of COVID-19 (<https://covid19.omeka.net/>). Although an unusual time, I do enjoy the opportunity to connect and learn from my peers. From these experiences, I am growing as a professional because I am collaborating and creating curatorial practices with highly regarded academics and museum professionals. As a 28-year-old curator who has served 16 months as The Virginia G. Schroeder Curator of Art, I am unbelievably grateful for this type of mentorship and inclusion. When in a crisis, it is important to look for silver linings. I am appreciative of my colleagues' and community members' time.

By the time this is over, each person will likely know someone who has been affected by COVID-19. You are not alone in this uncertain time and we hope you visit the virtual and/or physical exhibition to use as a platform to reflect and contemplate how lives have been impacted by COVID-19.

Links to some toolkits about COVID-19:

- <http://www.ala.org/tools/atoz/pandemic-preparedness>
- <https://sr.ithaka.org/blog/documening-the-covid-19-pandemic/>
- <http://digitalcollecting.lib.virginia.edu/toolkit/docs/getting-started/>
- <https://www.nytimes.com/2020/04/13/smarter-living/why-you-should-start-a-coronavirus-diary.html>

Tory L. Schendel Cox is the Virginia G. Schroeder Curator of Art at the Evansville Museum of Arts, History and Science. Schendel Cox serves as the Midwestern Regional Representative for the American Alliance of Museum's Curators Committee and works with other museum professionals to study and define 21st-century trends in the museum field. She can be reached at artcurator@emuseum.org

TOGETHER...APART

By The Science North Team

At Science North, despite these remarkable and unprecedented times, we have leveraged our 35 years of experience and the innovative, creative, and nimble strengths of our people. We've done this to maintain a shared focus on the power of the pivot and to shift quickly from difficulties to opportunities.

On March 14, 2020, Science North closed to the public and launched our new branding during the COVID-19 pandemic: 'Together Apart...Unis en séparation'. This has focused and activated many of our initiatives over the past 9 weeks and we are excited to share some of what we've been up to.

Science North must generate 60% of its operating revenues from self-generated sources. With no admission revenues during these challenging times, it's been vital to identify ways to mitigate the financial impacts of the current situation. Our entire organization came together via virtual town halls and visioning sessions to identify top priorities and opportunities for how we would best continue to achieve Science North's mandate, priorities and goals.

With hard work, collaboration and the vision of our team, we have maintained 90% of our full-time workforce working remotely on creative strategies and projects that are funded.

Together with the Ontario Science Centre, we are delivering on the Government of Ontario's *Learn at Home initiative*, which is reaching 2 million students. We are providing teachers with bilingual resources to support their delivery of the Ontario Science and Technology Curriculum at a distance. Our videos, lesson plans, and printable handouts are providing flexible and interactive STEM concepts that inspire elementary and secondary students and build their skills and core competencies.

Have a look, in [English](#) and in [French](#).

Our Bluecoats have supercharged their presence on social media platforms such as Facebook, Instagram, YouTube and Twitter as we engage our audiences of all ages with live, relevant and engaging content. We are achieving our highest level of digital engagement in our history!

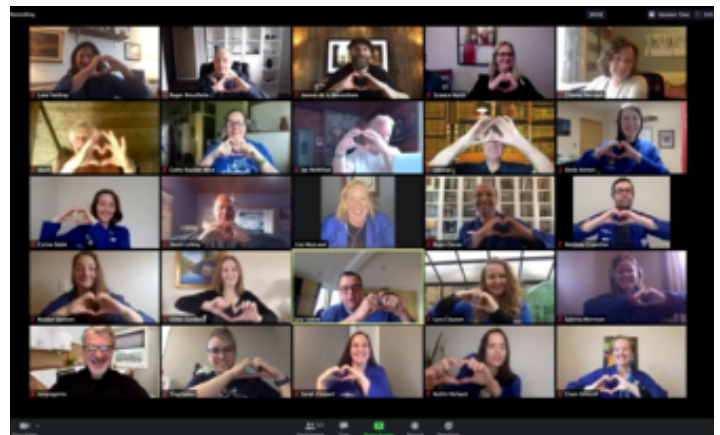
[Have a look at our digital content.](#)



Science North serves all of Northern Ontario (an area the size of Texas!). This is a key part of our mandate. In fact, we have a team permanently based in Thunder Bay - 800 miles from our base in Sudbury! This team has been creatively engaging with audiences in Northwestern Ontario, and have so far delivered 4,000 science at-home kits to food-insecure families.

Our Summer Science Camp program is usually hosted in 35 Northern Ontario communities. We are finalizing plans for some in-person locations, and are excited to launch a Virtual Camp & Science Kits program across Northern Ontario and beyond.

We have continued to advance Science North's major projects such as our new Climate Action Show multimedia theatre, our *Reasons for Hope* IMAX film with Dr. Jane Goodall and the completion of tour readiness for our Science of Guinness World Records traveling exhibit, the 13th exhibit produced by our team.



May 15-20, 2020, Science North staff meeting; Zoom screenshot with Minister McLeod.

Staying virtually connected to our teams, Board & Committees and our Ministry has been essential. For the first time in our history, our Minister, the Honourable Lisa MacLeod, joined us for a virtual all-staff meeting with 127 staff colleagues (including 4 babies!)! To quote her, “Science North is dynamic and forward-thinking; you were entrepreneurial and progressive before you had to be...You are a leader in the province and a leader in the North.”

Our team is hard at work designing our reopening plans that will include a number of phases for the gradual welcoming of our visitors.

For 50 years, science centers have been special places that provide immersive, hands-on experiences...it's been our 'secret sauce' that has now become our 'Achilles' heel'. Like you, we are designing and imagining a new normal for what our personalized Bluecoat and exhibit experiences will be.

Engaging with our science center colleagues across the globe has been invaluable in collaboratively sharing our plans - *thank you* to all of you for being so open in sharing ideas and knowledge.

With all the great things that our teams have been deliver-

ing on, we've also had a chance to celebrate. On May 28th the Canadian Association of Science Centres hosted its annual CASCADES Awards gala, virtually. Our team was so proud to have won 2 national awards!

Have a look at our videos of the [THINK Project](#) and our [Northern Ontario Science Festivals](#)

We hope to continue to celebrate and 'see' you at our virtual Canada Day celebration on July 1 when we will engage and celebrate our national holiday with our local, provincial, and national audiences.

It has not been easy to maintain a “glass half full” perspective in these daunting times, but it has been necessary in shifting us from difficulty to opportunity so that we may return to our pre-COVID-19 organization as quickly, safely, and successfully as possible.

Together we will emerge stronger than ever!

Julie Moskalyk is the Science Director at Science North and may be contacted at moskalyk@sciencenorth.ca.

LEADING IN A VUCA WORLD

By Marsha L. Semmel

I believe it was during the first week of March when a museum director colleague called me and said something like, “Well, Marsha, if this isn't a VUCA situation, I don't know what is.” Until that conversation, even as I was aware of the increased seriousness of the COVID-19 pandemic, I hadn't connected it with a condition I had spoken and written about—a state of the world that necessitates a quiver of new professional skills and an intentional focus on systemic solutions.

What is VUCA? Deriving from the military, VUCA is a term I first encountered in Bob Johansen's 2009 book, *Leaders Make the Future: Ten New Leadership Skills for an Uncertain World*. It stands for Volatile, Uncertain, Complex and Ambiguous. Johansen's book makes three key points:

1. The VUCA world of Volatility, Uncertainty, Complexity

- and Ambiguity will get worse in the future.
2. The VUCA world will have both danger and opportunity.
3. Leaders must learn new skills in order to make a better future.

The ten skills he describes, including “immersive learning ability,” “rapid prototyping,” and “commons creating.” They made sense then and only more sense now. [In a subsequent volume, *The New Leadership Literacies: Thriving in a Future of Extreme Disruption and Distributed Everything*, Johansen embellishes his ten skills with additional “literacies” and trends, such as the emergence of “shape shifting organizations” and operating in a “future of distributed authority.” He also introduced “VUCA Prime”: how Vision, Understanding, Clarity, and Agility can address VUCA situations.]

When I read *Leaders Make the Future*, I was in charge of Strategic Partnerships at the Institute of Museum and Library Services (IMLS), and we had just published *Museums, Libraries and 21st Century Skills*, a pan-agency project I directed. Working with some consultants from the Partnership for 21st Century Skills, a coalition of formal educators, educational associations, and the private sector, as well as a task force of museum and library leaders, our two main goals were supporting “museums and public libraries in envisioning and defining their roles as institutions of learning in the 21st century” and, for those outside the sector, ensuring “understanding among policymakers and other stakeholders about the integral roles museums and libraries play in creating an engaged citizenry and competitive workforce.” Among the 21st century themes we identified: global awareness; civic literacy; health literacy; and environmental literacy. Among the skills: critical thinking and problem solving; cross-disciplinary thinking; media literacy; flexibility and adaptability; and social and cross-cultural skills. Although we knew that some museums and libraries already addressed these topics, we highlighted them. We also emphasized the importance of nurturing these competencies within our own staffs.

While it’s hard to believe that these references were published a full decade ago, each holds lessons and insights for today’s VUCA environment—both about roles museums and libraries can play within their communities, and, as important, about the adaptive, flexible, and strategic leadership skills that need to be prioritized at all levels of our organizations.

I left IMLS in 2013 to work more exclusively in leadership programs, and in the May/June 2015 issue of *Museum* magazine, I published “Museum Leadership in a Hyper-Connected World: Six Skills for Leaders at All Levels.” My distillation included strategic agility; “getting personal” (emotional intelligence); communication; data fluency; rapid and rigorous prototyping; and systems thinking (seeing the big picture).

While these skills were by no means a comprehensive compendium, they remain, in my view, valuable components of today’s leadership tool kit.

COVID-19 has brought home, in vivid and concrete reality, the VUCA world in which we live. None of us—nor our institutions and communities—have a handle on the near (or distant) future. We need to value, prioritize, and practice new skills, competencies, and mindsets.

One of my favorite quotes comes from the French author Andre Gide, who wrote, “Man cannot discover new oceans unless he has the courage to lose sight of the shore.” The COVID-19 pandemic has unmoored many of us from our familiar harbors. Danger, yes. But new discoveries as well. The future demands courage, agility, and imagination. Who knows what opportunities await?

RESOURCES

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RESPONDING TO THE PANDEMIC

By David A. Ucko

The Covid-19 pandemic will be a seminal event for those who live through it. It seems unlikely that things will return to the *status quo ante*, even if vaccines become available sooner rather than later. How might science centers

respond?

At least in the short-term, “hands-on” experiences may become “gloves-on,” with disposable gloves provided on

admission at disinfection stations, or replaced by “hands-off” detection technology. Masks, possibly branded by the science center, may also be provided to those who need them. Admission will be limited initially by public caution and by timed-tickets and other entry controls. Programming by masked staff will emphasize small-group activities for those visiting together.

In addition to these types of operational accommodations, science centers can play more central roles in community-based STEM learning. For example, what other local institutions are better positioned to serve as the trusted locus for public education about the biology and treatment of infectious disease? To avoid each science center needing to “reinvent the wheel,” visitor activities should be developed for science centers through a collaborative NISE Network-type model (Ostman 2016) involving scientific, medical, and public health partners. Just as the normal pace and protocols of science R&D are being disrupted, the development process must be reconceptualized to become greatly accelerated.

Many people will continue to limit their outside activities. As a result, this might be an opportune moment to rethink a science kit program for home use. Growing up, I eagerly looked forward to receiving my monthly little blue box with “Things of Science,” created from 1940 to 1989 by Science Service, now Society for Science & Public (Knetzger 2011). To speed up dissemination, perhaps elements of existing NISE Network kits developed for science center use could initially be repurposed. Although developed centrally, kits could be branded or distributed by each science center, with opportunities for supplemental local programming. Ideally, external funding would help make such kits widely available.

Beyond addressing an immediate need, strategically-designed kits could provide a much-needed bridge connecting science centers with other components of the STEM-learning ecosystem. Coordinated to support school-based curricula, they could be supplemented by activities at the science center and community-based organizations, as well as by online communities and videos. Such ecosystem-integrated kits are one way that science centers can strengthen their ties with families, schools, after-school programs, and other providers. In so doing, they could both enhance STEM learning and their role in the community.

In an article on the history of science centers published last year (Ucko 2019), I closed by stating that they would increase their likelihood of thriving by building on research and evidence-based practice, innovating, collaborating, and taking strategic risks. That conclusion holds even more



Things of Science #275, Simple Machines (Sept. 1963). Kit included five wooden pulleys, dowel and two wooden sticks, corrugated paper for gear teeth, twine, wire, thumb tacks, screw eyes, and 28-page instruction booklet with 17 experiments. Credit: cbinvermont.

true today, as science centers respond to the unprecedented challenges and opportunities posed by the coronavirus pandemic.

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HOW WILL CORONAVIRUS (COVID-19) CHANGE MUSEUMS?

A FEW PREDICTIONS

By Mark Walhimer

As I write this, on May 15, 2020, we are in the second month of COVID-19 quarantine in the United States. All museums in the USA are closed and many museums have furloughed or laid off museum staff. As of today, the future¹ of museums is very much in flux and the future² is unclear.

If I was to make predictions:

1. Museum Closings: In the USA all museums are dependent on donations (including government funded museums). Sadly, the damage has already been done to many museums and a percentage of museums will close. As of today, I would estimate ten to twenty percent of museums will close within the next twelve months, that could amount to 3500 to 7000 museums³ closing in the USA. The majority of the museums that will close will be small local history museums with no or one or two staff members.

2. Museum Staff, Freelancers and Vendors: Many contracted museum workers (floor staff, educational staff, curators, art handlers, designers, registrars, etc.) will leave the museum field. Since the 1980's and Reaganomics museums have decreased museum full-time museum staff to be replaced by independent contractors. Many of these people will be unable to afford to return to museum work due to student loans, and personal debt accumulated during the COVID-19 quarantine. Also, many museum suppliers (exhibit fabricators, art shippers, art storage companies, etc.) will close.

3. Museum Consolidation: The impact of closed museums and loss of museum staff, contractors and vendors will be significant and will cause the consolidation of museums and museum services.

4. Reduced Museum Services: Many museums that survive will be forced to reduce hours, to close galleries and to increase online digital exhibits. Also, for the short term, "block buster" large scale multi-million dollar traveling exhibitions will be put on hold.

5. Museum Board of Directors: Many museums' Board of Directors will be reorganized to include a greater number of "old money" members, due to the impact of COVID-19

and the loss of wealth of many younger board members.

6. Visitor Need Driven: Both for the need for donations and for the civil societal needs, museums will be driven by the immediate needs for visitors (and donors).

7. Networked and Digital: The costs (both financial and staff / visitor safety) of operating an in-person experience will be greater than operating digital online experiences.

8. Greater Reliance on Metrics: Due to the hesitant reopening of museums, and decreased donations there will be a need for greater data regarding museum costs, museum revenue, visitor return rate, visitor dwell rate to manage costs.

9. Museum Building Cleaning: Prior to and during museum reopening there will be significant costs and efforts to prepare museum buildings to be free from COVID-19 pathogens, including HVAC systems, water systems, and museum collections. These operating costs will be expensive and difficult for the general public to understand as uncovered costs.

10. Greater Need for Collection Care: Prior to and during museum reopening there will be significant costs and efforts to prepare museum collections to be free from COVID-19 pathogens again these operating costs will be expensive and difficult for the general public to understand as uncovered costs.

11. Long Term: Assuming a reopening of museums in the timeframe of September to November 2020, the process will be slow and hesitant. Social distancing will remain in place and visitors will be prevented to gather in groups of more than ten people (preventing museum theater, lectures and group demonstrations). Museums will open only selected galleries with reduced museum staffing, while carefully watching costs and donations. This hesitant start – stop process of reopening museums will continue for at least one year (September to November 2021).

The second to third year of museum reopening will continue in a similar fashion to the first year in a series of starts and stops with limited museum events with slowly growing

groups of greater than ten people. There will be increased efforts to increase museum smartphone applications, museum online events and programming and smaller new exhibitions.

The third to fifth year after museums reopening museums will start to return to more normalized operations. There will be several significant changes:

- Greater “gig” museum staffing, with fewer full time museum staff
- Smaller, less expensive museum exhibitions
- More combined digital / tactile in-person visitor experiences
- More online museum experiences
- More reliance on earned revenue from ticket sales, museum memberships, and visitor paid programming.

Smaller, local, nimble museums will find the transition to the new museum reality less challenging. Large encyclopedic museums will be challenged with the new museum reality, as they are more dependent on corporate sponsors and have large operating costs. In the end, the new reality will benefit nimble visitor-centric museums that

can operate lean; artist, scientist, historian focused visitor experiences.

FOOTNOTES

1. <https://www.weforum.org/agenda/2020/04/alphabet-soup-how-will-post-virus-economic-recovery-shape-up/> website accessed April 17, 2020
2. <https://www.economist.com/podcasts/2020/03/30/covid-19-and-the-perils-of-prediction> website accessed April 17, 2020
3. <https://www.ims.gov/news/government-doubles-official-estimate-there-are-35000-active-museums-us>, website accessed April 13, 2020

Mark Walhimer, is Principal at Museum Planning, LLC <http://museumplanning.com>. He is the author of Museums 101 (<https://www.amazon.com/Museums-101-Mark-Walhimer/dp/1442230185>). You can find him on Twitter, where he is trying to post the most current COVID-19 resources for museums at <https://twitter.com/MuseumPlanning>.

CONTINUING THE METAPHOR OF EXTINCTION AND COVID-19

By Robert Mac West

In the previous Special Issue I discussed the significant event of the extinction of the dinosaurs about 66 million years ago that is generally attributed to an asteroid hitting the earth and causing very abrupt environmental changes. The result of that was the extinction of the nonavian dinosaurs and the subsequent proliferation of mammals occupying new and non-competitive environments. The metaphor is that perhaps we can consider the impact of Covid-19 as a stimulus for a substantial change in the environments that are occupied by museums and science centers, thus producing a measurable or even dramatic change in them and their impact on and reliance upon the environments in which they will “live”.

It is very interesting to watch the social media right now with its array of speculations and projections on the museum world of 2020 and beyond. I try to aggregate the news reports, statements from institutions, commentaries from the professional associations, etc. into several categories.

Trying to stay open in some form right now

Very few museums are open now. The most recent posting from UNESCO and ICOM suggest that about 90% of the world’s museums are closed. They further estimate that perhaps 13% of global museums may not ever reopen.

Closed and dealing with revenue and audience shortages

Many, if not most, of those that are closed are suffering financial stresses of various sorts. Obviously there are variation depending on the primary funding sources with many governmentally-operating institutions at least somewhat better off than those that are fully independent. It doesn’t take much to consider the multiple revenue sources that are not available at this time – admissions, food and gift shop sales, special events, facility rentals, blockbuster exhibits, etc. And there are indications that the overall stress has for some institutions significantly reduced their contributed revenues.

Closed and dealing with internal needs and responsibilities

Even though a museum is closed to the public that does not mean that it does not have operating expenses. At the basic one will look at security and basic building maintenance. And then there are collections responsibilities which, particularly for those with living collections, can require significant staff as well as environmental activity. And regardless of the collection composition, it must be maintained environmentally and with security that is responsive to the legal and ethical requirements of the museum.

Using social media in ways never thought of previously

Most museums have taken advantage of the mandated closures to significantly enhance their social media presence. It is truly remarkable how many remote tours the public can take, how many zoom, skype, etc. sessions there are with curatorial, education and management staff. I, as a person occupying his office virtually all day, have a varied schedule of webinars, tours, colloquia, etc. provided by museums in places I likely never will get to but now they are inviting me every day. This is a very interesting aspect of the Covid-19 situation as it, for many people, may well have convinced them that there no longer is a need to physically visit the museum since the exhibitions, interesting staff, and in many cases collections that otherwise are invisible are readily accessible – and at little or no cost in either time or money.

Preparing for re-opening in the near or unforeseeable future

Now, as much of the “lockdown” regulations are being modified and lifted the museums are looking at how they are going to be once again open. In many cases they are required to limit their attendance, often to 50% or less of the normal, and ensure that their visitors are following socially distancing of six feet or more. This both impacts the revenues that can be generated as well as the nature of the visitor experience. And in those institutions that rely heavily upon physically interactive exhibits (e.g., most children’s museums and science centers to be sure) much of their programming and visitor engagement is limited or even eliminated. Further, most museums have, over the past few months, reduced their staff size through position eliminations or furloughing of staff. This has reduced their immediate costs but now will require some careful reconsideration of what their new requirements will be for visitor engagement, building maintenance, etc. And, with the reduced revenues, what staff levels can be afforded?

Closing permanently

And finally, as suggested by UNESCO and ICOM, a significant number of museums have already determined that they are no longer viable operations and have closed

permanently or informed their communities that they will do so soon. Among the other issues encountered here is the appropriate treatment of their collections, whether they be art, history, science or living organisms. Some very interesting discussions are underway about moving collections to other institutions that have the capability of accepting and maintaining them or, in a provocative way, placing the collections on the market as a way to generate the revenues necessary to complete the closure of the museum.

CONCLUSION

In short, there does appear to be a significant environmental change underway, enabling me to continue to play with the metaphor derived from the extinction of the non-avian dinosaurs followed by the proliferation of mammals. Where will we see our museum world in the not-too-distant future?

A very interesting and useful source of data for the museum industry is the weekly reports that are being published by Colleen Dilenschneider of Know Your Own Bone. They have been coming out weekly since March. The most recent as of this writing is “DATA UPDATE: How COVID-19 is Impacting Intentions to Visit Cultural Entities – May 15, 2020.” She presents data from all the states of the United States that indicates when and to what extent the populations intend to return to their cultural entities. The broad conclusion is that those people who conventionally enjoy cultural experiences do indeed intend to return to them but at different rates, ranging from immediately to over a year. (<https://www.colleendilen.com>)

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THE “NEW NORMAL” WILL BE NORMAL

By David Whitemyer

Like so many of us, I bounce back and forth between being terrified and somehow optimistic about the museum field and our futures. And there are days where it seems I’ve got my head in the sand, pushing forward, pretending it’s business as usual.

We’re nearly two and half months into this. Stay-at-home orders, canceled conferences, homeschooling, and shuttered museums dominate our lives. It feels like an eternity, but at the same time, it’s only two and half months, a brief timespan. We know that this will pass.

Despite the short timespan and the temporary situation, museums have been rocked by lost revenue and staff reductions, with their financial sustainability uncertainty. On top of that, there’s the frightening unpredictability of whether visitors will return when they’re allowed to. If they do return, we don’t know how they’ll be feeling or what they’ll be comfortable doing and touching.

I’m inspired by the efforts our Luci Creative team is making right now, with clients and the museum community at-large, where we’re developing practical, cost effective solutions for the challenges and changes we’re anticipating as museums slowly return to operation. We’re helping to prepare for potentially anxious visitors, addressing concerns of returning staff, and keeping tabs on the mandated reopening requirements of different states and municipalities. We’re revising exhibit designs to encourage social distancing and to discourage direct touching. And we’re instituting new practices to ensure that our planning and design process always considers these new visitor motivations and behaviors, moving forward.

Our team, of course, isn’t alone in this effort. Museum staff, board members, exhibition designers, media developers, and other specialists in our industry are all working together. It seems that nearly each day is filled with webinars and online conversations where this topic is at the forefront. We’re predicting what the challenges, visitor concerns, and new requirements will be, to institute improvements and new protocols in preparation for post-COVID reopenings.

Perhaps I’m naive, but I truly believe that the “new normal” will eventually be pretty close to what we’ve known for a long time as just “normal.” People will visit museums in their leisure time. School field trips will bring throngs

of curious kids to cultural institutions. Guests will touch hands-on interactives, and docents doing programs will encourage tactile learning opportunities.

I hope, as stay-at-home orders are lifted, that people will be antsy and eager for the types of spaces and experiences that only museums can provide. As a response to COVID-19, museums will likely be incorporating touchless, technology-based solutions, such as mobile ticketing and capacitive styluses. But because individuals and families - and us too - have been over-digitized for the last two and half months with Zoom calls, friendly FaceTiming, and Netflix binge-watching, this may be the right time to remind our communities what museums offer: the opportunity to disconnect from technology, to explore spaces where you can come into contact with real, tangible objects - a painting, an artifact, or a natural wonder - to slow down, and to look around.

There has been so much great work done by museums in the last few months as they’ve developed online programs for children learning from home, fun videos to keep us all entertained, and “virtual” tours. But we can’t recreate the meaningful museum moments in the digital Zoom world that you get from being in front of actual artifacts or inside an immersive experience, or from participating in on-site group programs. We don’t have a crystal ball. We don’t know how visitors, staff, or volunteers are truly going to feel in the coming months and years. So let’s all keep working together to make adjustments in the immediate, to make people feel comfortable and inclusive, while offering them an authentic museum experience. Today I’m feeling optimistic. People will return to museums.

David Whitemyer is the Director of Business Development at Luci Creative, and an adjunct professor in Johns Hopkins University’s Museum Studies program. He can be reached at david@lucicreative.com.

MUSINGS ON MUSEUMS AND MASLOW IN THE TIME OF CORONAVIRUS

By Karen Wise

The impacts of the current pandemic across the globe would be difficult to exaggerate. The human toll as I write this is gut-wrenching - more than 5.1 million confirmed cases, and 333,398 deaths across the globe as of May 22 (<https://coronavirus.jhu.edu/map.html>). The economic, social and cultural impacts are echoing around the world. No place is untouched, and the blows to museums, museum workers and our communities have been universal, immediate and deep.

Most museums are now hurtling headlong towards re-opening, into the million practical, tactical, operational details of running a museum under these circumstances. Uncertainty reigns about the duration and cadence of the pandemic itself, let alone how our organizations, workers, and audiences will survive it. The practical questions we are asking are critical to our success. But what about bigger questions about who we are here to serve, and what they need?

One lens through which we might look at these questions is Maslow's famous hierarchy of human needs, which has been used by many museums as a simple heuristic device for thinking about audience needs.



In normal times, Maslow can be shorthand that helps remind us that if visitors are tired, hungry, or cannot find the restroom, they are not going to have a good museum experience, no matter how great the rest of the museum is. These are not normal times. And our visitors have been at home for two months or more. But Maslow's pyramid can still be a useful tool. It reminds us to look at our audiences and at the impact we hope to have, and perhaps to pose questions just a little differently as we emerge from closures into a period that is filled with financial and operational constraints. What needs can we fulfill best now, with the resources we have?

Focusing on the needs we can fill

No museum can fill the needs of all audiences and community members. Where we choose to direct our resources will determine who we help and likely how much impact we have with different potential audiences. Too many communities in the U.S. are experiencing food insecurity (see <https://www.brookings.edu/blog/up-front/2020/05/06/the-covid-19-crisis-has-already-left-too-many-children-hungry-in-america/>). Food sits as a physiological need at the base of the pyramid, one that must be filled first, before others. That reality leads some to say that we may be important but that the need for museums is not urgent, that our time to help is not now, but will come in a second wave. There are only a few exceptions (e.g. Crystal Bridges <https://crystalbridges.org/community-engagement/>).

The next level of needs is that of security. This is one we are all thinking about as we consider how to reopen safely. In reopening, the safety and security of our visitors and of our staff – and their perception of their safety and security – are critical. This is a major focus of most museum teams right now. From close work with local officials to the most specialized considerations of the layout and functionality of each museum interactive, those museum staff that still have jobs are embroiled in this work.

Then there are the summer camps – critical child care for member and other families, and first opportunities for children to emerge from their homes and return to some semblance of 'normalcy.' Museums and science centers that succeed at providing quality experiences while keep

ing kids safe and parents comfortable will have performed what will feel like miracles, doing away with a critical deficit, at least for a lucky few.

Museums, as we reopen, may also be able to help fill at least a few of visitors' social needs. In normal times, the social wants or needs we fill are mostly for family time or fun activities for groups of people doing things together. As people emerge from sheltering in place, from being at home with only the members of their own households and close family, we will be asking them – and they will be wanting – to stay in their household groups. The role of staff in interacting with them will be critical to providing for those needs, making a first outing for pleasure into something successful and even joyful.

Esteem needs and self-actualization needs are the usual bread and butter of what we can provide, and they are where we have been most successful with our digital collecting and experiences during the time of our stay at home orders and advice (e.g. <https://museumca.org/make-a-map-whats-your-oakland-story> and <https://theautry.org/research/blog/autry%E2%80%99s-collecting-community-history-initiative-west-during-covid-19>). When we provide fun, interesting experiences for our audiences that make them feel successful, we fulfill our missions: inspiring curiosity, allowing people to feel they are learning and having fun, providing pleasurable experiences with art, relevant experiences around history, and making science public and applicable to everyone. There are extraordinary new opportunities to bring what we do to visitors in richer and more impactful ways when they return to us in limited numbers. These may be more personalized experiences, more one group with one interpreter experiences, more timely science stories (e.g. <https://nysci.org/home/science-behind-coronavirus/>), or history stories that hit home (e.g. <http://museum.org/exhibitions/going-viral-behind-the-scenes-at-a-medical-museum/>).

The needs we leave unfilled

Looking at what categories of needs we can fill for our communities and visitors can help us think about how to focus our energies. It can also help us notice and acknowledge those we are not filling.

The first is the wrenching loss of jobs. In the U.S. alone, more than 38 million people are newly out of work (<https://www.washingtonpost.com/business/2020/05/21/unemployment-claims-coronavirus/>) and museums are no exception. There was a 26.1% drop in the number of employees in the “Museums, historical sites and sim-

ilar institutions” sector in the first two months of the crisis (<https://fivethirtyeight.com/features/the-industries-hit-hardest-by-the-unemployment-crisis/>) That's a half a million museumers who had a job in February, who were without one in April.

The field as a whole does not seem to be responding, or even talking much about these catastrophic job losses. Our professional organizations vary in how much they are even acknowledging these job losses, with smaller, regional and more specialized organizations providing more services and support than the large ones. The Visitor Studies Association (VSA), for example, runs a weekly virtual support group for those that have lost their jobs, and several other specialty and grass roots organizations are doing more. The only visible national concrete action being taken in support of our colleagues who've lost their jobs is the Museum Workers Relief Fund, begun by one of the founders of Museum Workers Speak, and being promoted by grass roots social media (<https://sites.google.com/view/museumworkersspeak/home>).

There is also the continuing question of whose needs and wants museums are focused upon.

Museums are under tremendous pressure, and some will not survive to reopen. Those that do will be more valued by those they have entertained, interacted with, and provided for during this time, as well as by what we offer to whom. It's a good time to bring a visitor focus – as well as a staff focus – to all we do. Maslow may be of some assistance.

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BECOMING ESSENTIAL

By Karen Ackerman Witter

COVID-19 is affecting everyone, albeit in highly different ways. Front-line health care workers, individuals out of work, small business owners, those working from home with children needing attention, non-profit leaders and staff, elderly people in nursing homes isolated from family, and individuals suffering from this new disease are all hurting. Our country is more divided than ever. Partisanship is at play everywhere. The pandemic has brought out both the worst, and the best, in people. Within the museum world, it has frequently brought out the best.

From the smallest to the largest zoos, natural history museums, art museums, children's museums and historic sites, museums have stepped up to remain relevant and serve their communities. Directors and board members are striving to lead compassionately and empathetically through this time of crisis and pursue all opportunities to continue to fulfill their mission. In addition to offering online content and educational programming, museums are finding new ways to use their expertise and resources to help during this time of need.

Sadly, many museums have been forced to furlough or lay off staff, with more staff reductions likely on the horizon. Yet, in the face of this, many museum staff are demonstrating an even greater level of commitment to their institution as they know its value and want it to succeed. They are often doing this from home, while also taking on a new responsibility to home school their children.

Museum staff are connecting with their colleagues to share information and discuss strategies. State, regional and national museum associations are compiling resources, hosting webinars and Zoom calls and convening "museums helping museums" networking opportunities. Museum colleagues, who may only see each other periodically at conferences, are checking in with each other to reconnect and ask how each other are doing.

Museums have evolved over the years, and there has been a growing commitment to meet community needs, serve diverse audiences and be connected to communities. Museums are often considered "nice", but not fully recognized nor appreciated as essential. Through its advocacy initiatives, the American Alliance of Museums (AAM) has been working to change that by encouraging all museums to engage in advocacy – at the local, state and national levels. "Essential" in this time of COVID-19 has taken on new

meaning. Going forward, museums have the opportunity to both *be essential* and be *recognized* as essential.

But, for this to happen, museums need to be deeply engaged with their community. And, this engagement must be not only with visitors, but with policy makers and community leaders. Although AAM has been promoting the importance of museum advocacy for many years, it is not a priority for many museums. Often times museums are so busy "doing the do" that there is not enough time to devote to advocacy. There are lots of reasons advocacy doesn't make it to the front burner. Advocacy is not a once and done activity and needs to be ongoing. There are simple ways to incorporate advocacy into ongoing operations. Board members can, and should, play a major role. There are lots of resources on the AAM web site.

Imagine a new world where instead of the museum reaching out to ask for community support, policy makers come to the museum – from school board members to the mayor, aldermen, state legislators, governor and members of Congress, because they value and need museums to fulfill goals for education, economic development and quality of life.

Museums inspire. Museums foster learning. Museums engage. Museums connect. Museums are economic engines. Museums are trustworthy. Museums are community anchors. Museums change lives. Museums matter. Museums are essential.

RESOURCES

American Alliance of Museums, <https://www.aam-us.org/programs/advocacy/>

Why Advocacy Should Be a Best Practice of Museums, <https://www.aam-us.org/wp-content/uploads/2017/12/karen-witter-iha.pdf>

Real World Advocacy = Disaster Planning, <https://www.aam-us.org/wp-content/uploads/2017/12/real-world-advocacy-disaster-planning.pdf>

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THE INFORMAL LEARNING REVIEW

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ON THE COVER:

Science North conducts an online staff meeting with Minister Lisa McLeod as shown in this Zoom screenshot. Full story on page 33.

