A Trip to the MSI

Christian Belanger

> *"To youth, confused by twisted ideologies, we let the thundering facts of American industrial history speak."*
>
> —Lenox R. Lohr, President of the Museum of Science and Industry (1940-1968)

> *"I've seen aquariums and planetariums and that dreadful Museum of Science and Industry, which is like a paean to General Motors. Quite ghastly in its corrupt values—including its splendiferous Muppet presentation, where you pay $1.50 to get in, see fifteen stuffed Muppets in a glass case, and then that leads to a shop where you can buy merchandise! I mean, it was a fucking disgrace."*
>
> —David Bowie, 1980

Christian Belanger is a third-year in the College majoring in Philosophy.

According to the website of the Museum of Science and Industry (MSI), about 344,000 schoolchildren visited in 2014; if we assume that most of Chicago's schools are in session for 180 days a year, a rough calculation reveals that about 2,000 students pass through the museum every day. This means that on any given weekday of the school year, adults who choose to enter the Museum of Science and Industry will find themselves severely in the minority, outnumbered by the hordes of elementary and middle school students running, yelling, sneezing, and sometimes sobbing their way around the museum's exhibits. And while some kids move aimlessly between exhibits, most rush around, eager to explore the interactive attractions designed to capture and hold their attention, like a

game run by a pedagogical, holographic Derrick Rose that teaches projectile velocities and angles, or Mindball, a two-person contest in which the person whose brain activity is more relaxed wins.

The MSI is largely organized around the idea that it is an appealing destination for schools and parents looking to amuse and educate their children. A picture book of the museum released in 1950, titled simply *The Museum of Science and Industry*, reads, "In accomplishing its job as an educational center, this institution has changed the whole connotation of the word 'museum' from the dead to the quick, so to speak." If that was true sixty-six years ago, it is even more true now: it's undeniable that the MSI is deeply and dynamically entertaining. The museum's first stewards understood that, while one might visit the Art Institute out of a dreary sense of civic duty, or take visiting relatives to the Field Museum, the Museum of Science and Industry had to have a certain degree of pep.

But since its beginning, the MSI has also been, as its name obviously suggests, an institution bound up with and dependent on American industry, a place where companies pay to put on certain exhibits, often about themselves. It is also a museum that unreservedly taps into the popular enthusiasm and unfettered optimism that mark so much of public discourse about science and technology in the 21st century. Both of these elements play into the ways the MSI educates the schoolchildren that flock there, and the resulting mixture of museum, advertisement, and manufactured enthusiasm is what continues to mark it out as a place of delightful, terrifying fun.

The Museum of Science and Industry received its first visitors in June 1933, a couple of weeks after the opening of the Century of Progress International Exposition. That was the second World's Fair held in Chicago, but the MSI building itself dates back to the first World's Fair—the famous 1893 World's Columbian Exposition that journalist Richard Harding Davis described as "the greatest event in the history of the country since the Civil War." At that time, it housed the Palace of Fine Arts, one of the few parts of the Fair dedicated to showcasing painting and sculpture—distinct in this way from the technological prowess put on display almost everywhere else. It was

The men whereof were of a Grass-Green complexion.

also the only building whose exhibits were so expensive that it was built with brick to prevent its destruction by fire, a problem that plagued the wood and plaster structures that made up the rest of the Exposition. As a result, the Palace remained after the rest of the Fair burned down or was dismantled.

For a couple of decades, the building would house the Columbian Museum of Chicago (now known as the Field Museum). When the Field moved north in 1920, though, the building stood vacant for some years, until Julius Rosenwald, the famous philanthropist and part-owner of Sears, Roebuck and Co., came back from a 1911 trip to Europe. There, Rosenwald had visited the Deutsches Museum in Munich, then and now the world's largest exhibitor of science and technology.

In *A Continuous Marvel,* Chicago journalist and historian Herman Kogan describes the effect of the visit on Rosenwald's son:

> *There, his eight-year-old son, William, had discovered and been fascinated by trips to a unique museum....By pushing buttons or working levers or dropping a coin in a slot, William could generate static electricity, see pistons traveling back and forth in engines whose cylinders had been cut open, light up an X-ray machine so that the bones in his hand were strikingly revealed when held up against a fluorescent screen, and look at the wheels of a jacked-up steam locomotive spin around.*[1]

Rosenwald decided that he wanted to build something akin to the Deutsches Museum in America. Initially, he was skeptical

1. Herman Kogan, *A Continuing Marvel: The Story of the Museum of Science and Industry* (Garden City, NY: Doubleday & Company, 1973), 11.

of the Palace of Fine Arts building, declaring that he preferred a building more "practical in type rather than monumental."[2] He was soon persuaded otherwise, however, and in 1926 the newly formed executive committee of the Museum of Science and Industry acquired the Palace.

2. *Ibid.*, 15.

From its beginnings, the MSI drew deeply on its European counterparts for inspiration on how to present its exhibits. The museum's first two annual reports, spanning the three years between 1928 and 1930, give the extensive transatlantic itinerary of Waldemar Kaempffert, the museum's first director, in which he studied technical museums in cities like Dusseldorf, Budapest, and Antwerp, as well as the inimitable Deutsches. And Kaempffert felt as fiercely as Rosenwald that the job of the MSI would be to inculcate the same whirring, spinning sense of marvel that young William had experienced at the famous Munich museum. After a banquet in honor of his appointment, he told reporters, "There will be no collection of mechanized fossils. You will feel yourself part of a great evolving industrial organism. We are going to have activity! Buttons to push! Levers and handles to turn! And nowhere any sign reading 'Hands Off'!" It should be noted, for any aspiring visitors, that such signs do exist now, most notably and disappointingly in the bicycle exhibit.

But after its opening, the MSI sputtered along quite feebly at a financial loss; by 1938, its deficit was $353,000, and it had no regular way to raise revenue, especially since it didn't charge for admission. The museum's trustees, increasingly desperate, enlisted Lenox Lohr, a former engineer and then the President of NBC. The strategy for turning around the MSI that Lohr adopted upon assuming his office in 1940 would define the museum's path up to the present day, and Lohr himself summed it up best when he told some of his staff members, "Very large sums of additional money must be obtained, and the only place I see to get them is from industry."[3]

3. Ibid., 98.

Over the next decade, Lohr would oversee the installation of a number of exhibits sponsored by various corporations: the Santa Fe Railway model train exhibit, running 3,000 square feet across a miniature America, a Standard Oil display "tracing the exploration

for and uses of petroleum," and the General Motors *Motorama* that David Bowie disliked so much. He coupled this profitable tactic with a deep commitment to the "mass education" of MSI visitors about the wonders and possibilities of American industry—it was under Lohr, and with the support of the superintendent of Chicago's schools, that groups of children from elementary and middle schools across Chicagoland first began thronging to the museum, over 100,000 of them annually by the late '40s.

The renaissance was undertaken with a grave air of ideological responsibility, as evidenced by this *de facto* mission statement from the 1950 picture book, which stands as a sort of introductory chapter to the Cold War:

> *American industry, aided by scientific research, has constantly placed within the consumer's reach a better way of living, has helped to give the world the fullest life in recorded history. A responsibility exists to tell that story. It must be told to clarify past misunderstandings, to prevent further misunderstandings, which, if allowed to grow, might undermine that combination of science and industry functioning under the aegis of a democracy. It is this responsibility which the Museum of Science and Industry is sharing with industry, with science, with America.*[4]

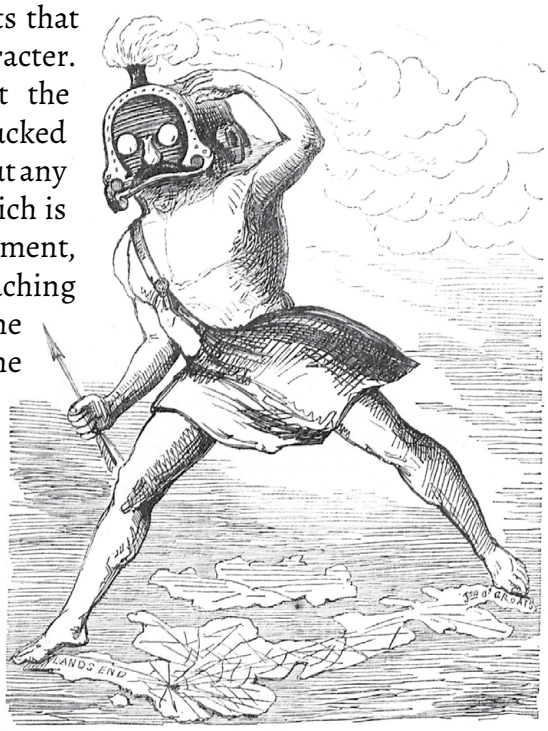
4. *Chicago Commercial Club, Committee on the MSI,* "The Museum Goes to War," (Chicago: Chicago Commercial Club, 1943) 9-10.

The gravitas is funny, but more remarkable is the clear-eyed, keen-hearted patriotism with which Lohr and his staff approached their jobs. Kogan writes that, during his earlier tenure, Kaempffert wanted to include some information on the dangers of congestion and urban pollution as part of an exhibit on skyscrapers and city planning. The Board of Trustees turned him down, reasoning that it was not their place to opine on something best left to politicians. But the MSI had no problem extolling the virtues of industry or, even better, allowing industries to extol their own virtues.

And Lohr's model was wildly successful. In the first year of his reign, attendance increased by about 40,000. In his second, it increased by 400,000. Gradually, the deficit was reined in; by the end of World War II, the MSI was operating at a steady profit. In part,

this was due to the diversification of its stock holdings to the same companies, like General Motors and Dow Chemicals, that had paid for exhibits at the MSI—a mutually beneficial arrangement.

In my several recent trips to the museum, it's clear that many parts of the MSI still straddle the strange line between exhibit and advertisement. The model railway continues to run, though it has added a couple of sponsors—rail cars emblazoned with the wonderfully generic (but very real) Hub International Group logo; Maersk model shipping crates moved back and forth by orange cranes—and the John Deere tractors and combines fill up the exhibit floor next to an idyllic Midwestern home dedicated to the wonders of all the soy-filled food products you unwittingly consume. A small naval exhibit tucked away in a corner near the famous U-Boat is sponsored in part by Donald Rumsfeld. There are also attempts to capitalize on the more intangible advances of the burgeoning tech sector; an IBM-sponsored exhibit is devoted to the ideas and possibilities associated with data analysis.



But I also saw some exhibits that were distinctly modern in character. It's perhaps most evident at the Toymaker 3000—a name plucked out of a Roald Dahl book, without any of Dahl's winking slyness—which is sponsored by Junior Achievement, an organization devoted to teaching young children how to become budding entrepreneurs. The exhibit is housed in a pair of rooms decorated with the color scheme and subtlety of a traffic light: vomitous greens next to screaming reds (and kids). The ostensible purpose of the place is to show children how to run Ball Enterprises (whose actual existence I'm still unsure of),

a company manufacturing juggling balls and other circus supplies; its real goal appears to be something like a zany indoctrination into the tenets of capitalism. Each child is given their own toy to take with them through the exhibit, and a series of arcade-like games test their business acumen.

One game I played—ominously titled "Don't Drop the Ball!"—began by informing me that my company was on the verge of experiencing a hostile takeover. What would I do? My options were given to me by three nightmarish cartoon heads, each apparently voiced by a similarly dysfunctional piece of text-to-speech software. Economic illiterate that I am, I panicked and picked the wrong answer, of course—you have to account for tangible and intangible assets when evaluating the worth of your company (I had only thought only the former mattered).

I got the next two questions right, though. "Now you're acting like a CEO!" the weedy-looking animation on the screen praised me. (I can only assume the poor, sycophantic drip was my accountant.) Meanwhile, behind me, some children were ascending the corporate ladder, this time in the form of a rock climbing wall, hauling themselves up by handles exhorting them to "buy equity" and "ensure the stockholders make a profit."

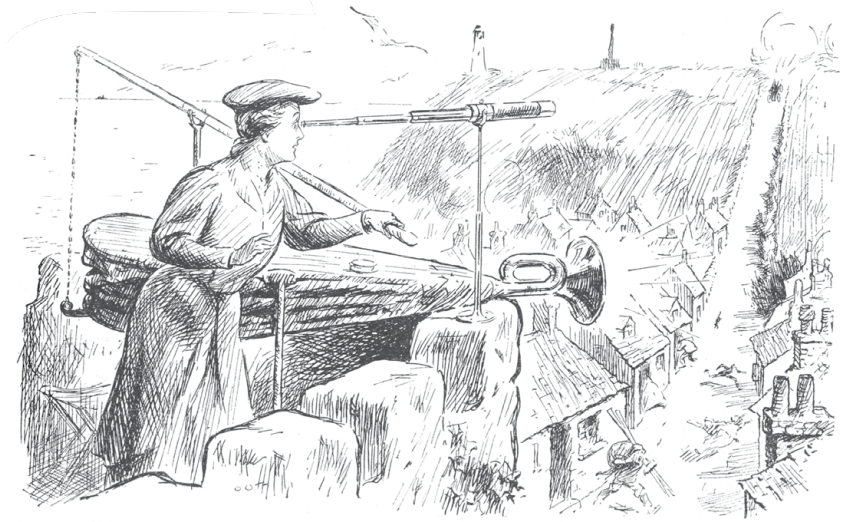
Vaguely uneasy, I wandered into the next room, where I was confronted by the pictures and paraphernalia of great past captains of industry, from Kroc to Penney, Bean to Boeing, each lauded for his (or, occasionally, her) daring vision and risk-taking abilities. These imposing examples of great entrepreneurship are in line with Lohr's vision of a museum designed to create a sense of reverence among its young visitors. It's a sort of celebration of individual brilliance that is, quite literally, a frequent sight across the museum: famous names—Lamarck, Morse, Darwin, Foucault (the physicist and not the philosopher, as my editor kindly pointed out to me)—are carved into the walls of the main hall, just below the ceilings.

Sometimes, though, the celebration seems slightly premature. Take, for instance, the presence of Aubrey De Grey in the Fast

Forward exhibit, dedicated to posing such incisive questions about the future as, "What if your pizza could be delivered via email?" De Grey is a biogerontologist, which means he studies the science of aging. He is, to say the least, a divisive figure: an editorial in MIT's *Technology Review* once labeled him "a troll," and critics allege that his anti-aging proposals are overly sensationalistic and deeply flawed. But the MSI exhibit does little to teach the controversy surrounding De Grey, instead presenting his seven types of aging damage as undisputed fact under the tantalizing question, "What if you could live to be 200 years old?"

It's this sort of ethical carelessness that's echoed later on in the exhibit in the case of Peter Diamandis, the creator of the Ansari X Prize that awarded $10 million to the first non-governmental company to send humans into space twice in a fortnight. But apart from a recounting of his achievements—or, as is befitting Diamandis' brand of utopianism, his perpetual near-achievements—there is also "Peter's Laws, a Sociopathic Obsessive Compulsive Creed," featuring such highlights as: "When given a choice...take both!"; "When forced to compromise ask for more"; and the common-sense but slightly puzzling addition of "The ratio of something to nothing is infinite." (One pictures Diamandis reciting the last one as a sort of mantra to himself in the mirror each morning.) If you swing by, you may also notice that those celebrated are almost overwhelmingly male. In the Fast Forward exhibit, there is one woman among the ten people featured: Ayanna Howard, a professor and NASA scientist.

But the experience of an exhibit like Fast Forward is a far cry from the remaining vestiges of the old MSI. The model railroad and the John Deere displays tie industry to the quotidian: American ingenuity has put these unthinkable wonders at your everyday service and given you the highest standard of living in the world—admire them. Meanwhile, there's also Science Storms, unveiled in 2010. Science Storms is dedicated to explaining the science behind natural phenomena like tornados, earthquakes, and hurricanes. Of course, I'm not sure if I saw anybody stop to read the explanations next to each display; instead, visitors flock to the simulated tornado vortex and live lightning coil. The entire room is cast in a sort of



The Empress desired to know what Stars there were besides.

hyperborean light, the dark blue tint of an action movie laboratory. Quotes about the vague wonders of science are inscribed on the walls from the likes of Carl Sagan and Richard Dawkins, perhaps best-known at this point for his crypto-philosophical, deeply orthodox atheism.

In exhibits like these, the MSI seems to borrow more than simply a quote from Dawkins. In a paper on Dawkins and the other members of the New Atheist movement, philosopher Massimo Pigliucci defines their particular brand of "scientism": "a totalizing attitude that regards science as the ultimate standard and arbiter of all interesting questions; or alternatively that seeks to expand the very definition and scope of science to encompass all aspects of human knowledge and understanding."[5]

5. Massimo Pigliucci, "New Atheism and the Scientistic Turn in the Atheism Movement," in *Midwest Studies in Philosophy* 37 (2013), 144.

The sort of view Pigliucci describes is frequently, in my experience, accompanied by a corresponding attitude of deep enthusiasm for scientific achievement. Science becomes a sort of panacea, idealized on Facebook pages like "I Fucking Love Science" or in the fandom of charismatic figures like Neil DeGrasse Tyson and Bill Nye. And exhibits like Science Storms and Fast Forward are another node on this network, helping to spread the idea that science is inherently and always something ideally good, helping to improve the world around us.

That is not to refute the obvious, that science can and does

continually improve the world around us. And one might think that the job of the MSI is exactly to leave its visitors with a fresh sense of the possibilities of scientific achievement, especially in a country whose rhetoric on the issue is sometimes frighteningly backwards. But one can believe both of these things, that science is good, and that more people, especially young ones, need to hear that, while also believing that a museum like the MSI has a duty to educate its visitors about the problems that have inevitably followed along with the progress of science.

It is not simply in its atypical dynamism, then, that the MSI is not a museum: it also lacks the appearance of impartiality that most museums possess. And as fascinating as an exhibit like the Toymaker 3000 can be, it's a little bit worrying that thousands of children pass through it every week, essentially forced to listen to the unopposed voice of a certain ideology.

As the epigraph from Lohr at the beginning of this essay shows, the MSI was founded on the belief that there was a need to educate children about the benefits of capitalism, specifically American industrial capitalism. The basis for that belief is obvious; can there be any doubt which "twisted ideologies" Lohr was referring to? Its method was straightforward, too: leave a stark impression on the hearts and minds of its visitors. Whether or not you think all of this is a good thing depends on the beliefs you subscribe to, but at least it had a clear task.

Today, though, the problem of scientism—which has been around since the MSI's beginnings—can be harder to inveigh against, mostly because the political underpinning is much slipperier. Recently, DNAinfo reported that the vast majority of the newly hatched chicks in the genetics exhibit are sent to the Lincoln Park Zoo to become fodder for snow leopards, snakes, and other animals. One can sort of imagine everyone's healthy, justified disgust for someone who stood at the hatchery sharing this fact with every tween who passed by. It seems akin to telling them that Santa Claus isn't real, or that *808s & Heartbreak* is Kanye's best album: a needlessly iconoclastic way to spoil somebody else's fun. In some ways, this essay might be reminiscent of that attitude; after all, it's *good* that the MSI is fun,

and is able to instill a sense of wonder about science in the (many, many) children that visit it every day, right?

But it still seems that even if we want everybody to appreciate the awesome abilities of science, we can still want them to turn a critical eye toward its limitations, even from a young age. This is especially true of a museum where so many of the exhibits are sponsored by companies and organizations who have a vested interest in making sure the side of the story most favorable to them is told. I think there's room for a better MSI, one that's entertaining but even-handed, thoughtful without being too dry. One could start, for example, by devoting more space to the solutions being developed for something like climate change, or expanding on the hard times industrial laborers have historically suffered. Above all, it would be a museum that helped its patrons understand that science and, more obviously, industry can never truly exist in a vacuum, but will always be bound up with certain political and social norms that we should be aware of.

There are, to be sure, brief nods to the problems scattered throughout the current museum: a mention of the dangerous conditions endured by many railroad workers, or a stone gargoyle ruined by acid rain. There is even an open forum of sorts, a room where people sit in chairs while being asked their opinion on certain questions of scientific ethics, like the acceptability of mind-enhancing drugs. When I walked by, though, nobody was participating, and understandably so: as far as attractions go, it pales in comparison to live lightning and climbing walls.