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The Culture of Archives, Museums, and Libraries Aparna Subramanian March 12, 2020

# Observational Study: New York Transit Museum and National Museum of Mathematics

I conducted my observational study at New York Transit Museum (Brooklyn), a museum dedicated to mass transportation in New York, and MoMath: National Museum of Mathematics. I visited the Transit Museum over a weekend, 8<sup>th</sup> March 2020 from 10am to 1pm and the MoMath during a weekday, 11<sup>th</sup> March 2020 from 11.30am to 3pm. I used my phone make observations for both the museums. I also interacted with the staff.

# **Background:**

Both museums have an entry fee, and membership schemes. The Transit Museum charges \$10 for adults, \$5 for children and senior citizens. There is reduced fare of \$5 for visitors with disabilities. At MoMath, the adult fee was \$18, students or senior citizens \$16, and \$15 for kids.

The New York Transit Museum expresses history of mass transportation in New York with focus on the subway system. The museum is located in a decommissioned Subway Station in Downtown Brooklyn. There are two levels, the first one with old photographs and paper exhibits, showcasing the fascinating history of public transportation in New York City. The experience becomes exciting when you go to the lower level where the vintage carriages are displayed side by side on the platforms of the station, one can enter the vehicle and sit down too.



Figure 1. The decommissioned Court Street station, site for New York Transit Museum

MoMath is located near Madison Square Garden. It occupies two floors, but is not a large museum. While they call it a museum, there are no exhibits or material that are of historic nature. Instead, it is a collection of hands-on interactives with spatial awareness, and physical activity like pedaling and climbing. The interactive exhibits have a background in concepts of mathematics and physics, often those a grade and junior-high kid would be learning in school.

# Demography

In the Transit Museum, the proportion of men and women was almost equal, 12 out of 23 vistors were women accompanied. Some were local families consisting of kids, parents and grandparents, and some couples. I didn't see people of many nationalities in the museum, except a Japanese couple. It was not very crowded for a weekend.

In the MoMath Museum, the proportion of women visitors was higher, 11 out of 16 visitors were women. Even here, it was mostly local families which came in combinations of parents-kids, mother-kids, grandparent-teenage granddaughter, grandmother-teenage granddaughter, a young and an old couple. The fathers were not interested in the activities, while mothers and grandparents seemed to enjoy the interactive exhibits. The younger kids enjoyed more in the lower level and the two teens enjoyed exhibits in the main floor.

# **Activities, Interaction, Attention inside the Museums**

A common factor for both museums is that they are not the traditional kinds, where you walk up to something, look at it and say, "That's interesting" to move on to the next exhibit. Both have elements of interaction and engagement. Some exhibits in the museum can occupy plenty of time and others not so much. Also, both these museums are geared towards kids. However, the attention span of kids can be unpredictable, especially at the MoMath.

The Transit museum works by triggering nostalgia among parents and grandparents, those who grew up in New York City. The MoMath lets the children have fun with the activities, while both elders and children alike trying to understand concepts in Mathematics, physics or maybe are there just for fun. I had moments of nostalgia here with some of the activities. It reminded me of summer vacation trips to Bangalore in India, and often going to the science museum near Cubbon Park, known as the Visvesvaraya Industrial and Technological Museum. <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Visvesvaraya Industrial and Technological Museum, Bangalore, India https://www.vismuseum.gov.in/about.html

The New York Transit Museum focuses on history of public transportation, how they were built and different equipment used. It is a good mix of history and engineering for adults, and there are trains and buses to play with for the kids. The station is old, so excited kids tend to echo.



Figure 2. Kids driving a bus

The Museum has climate control in selected zones due to being an old, but operational subway station. It has 10 different models of historic, restored subway cars. Visitors can walk inside them and kids run wild and hop on to do the role-play of being the driver or engineer. There are different turnstiles through the years, from every decade and you can walk through them. The advertisements in the subway coaches correspond to the era they belong to, spanning from 1940's to date. There are many old maps and sign boards of the NYC subway system displayed all over, some are 100 years old.

I remembered seeing 'vintage subway ride' advertisements when I just arrived in New York at many subway stations, this was in September 2019. So, the restored coaches/ cars are functional, and occasionally the MTA does give the chance for people to be transported in time by riding in the old subway cars.

They have an ongoing photograph exhibition "Streetscapes & Subways", which were shot by Pierre P. and Granville W. Pullis. An article about the same was published in Curbed New York, an online portal. <sup>2</sup>

The Transit Museum has spaces in the museum that are available for rent to filmmakers, press or photographers to shoot. They have schemes for their members, or people to rent some parts for birthday parties.

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<sup>&</sup>lt;sup>2</sup> Spivack, C. See the evolution of NYC's subway system in vintage photos. Curbed New York. https://ny.curbed.com/2020/2/14/21136961/nyc-subway-photography-exhibit-new-york-transit-museum



Figure 3. Brooklyn Union Elevated Car 1407 (1907)



Figure 4. Ad, corelated to the current 'virus'



Figure 5. Turnstiles from different eras



Figure 6. Signboards from different eras

MoMath seemed like a place to visit as an adult with children. There are amusing activities which are based on concepts of math, and some require physical activity of climbing, riding, pedaling, walking. There were activities like structured modelling and pattern meshes. Some of the exhibits were broken and not functional, some had stickers of "demo" only for only the

museum staff could operate it. The explanations for many exhibits were available from the computer terminals near each exhibit. However, I felt that all visitors, adult or kid, did not really understand the math behind every exhibit. The museum staff does try to explain as well.

The only thing that was explained was the exhibit of how the square-wheeled tricycles ride with different size of squares on every wheel, which was because of the perpendicular nature of the wheels and grooves in the track.



Figure 7. Square-wheeled tricycle ride

The lower level has a section called 'Enigma Café', which have many board and mind game type of activities. One of them was peg solitaire, which I knew of in my childhood as 'Brainvita'. It was nostalgic to sit and play it for some time!



Figure 8. Peg Solitaire

MoMath does not have themed exhibitions. However, they have a program called "Math Midway 2 Go". It is a presentation of six interactive, hands-on activities which are mathematical exhibits which can be used for schools, science festivals and libraries.

### **Moving Image Displays**

There was a video display in the Transit Museum of how the Metropolitan Transportation Authority (MTA) authorities handled the tragedies of 9/11 and Hurricane Sandy. It showed how efficient and caring the authorities were, even though they were not trained for it.

At MoMath, an exhibit called Human Tree had two cameras, and the movements an adult or kid made with hands, created tree like imaging in front of you. There were options in the screen nearby to change the leaves to autumn, summer, winter and day/night combinations. At this exhibit, I was reminded of how my nephew taught me to dance along with the Xbox in 2013!



Figure 9. Human Tree, camera-based exhibit at MoMath

# **Digital Devices Policy**

New York Transit Museum allows photography with cellphones and digital cameras. They have restrictions on professional photography gear, selfie-sticks etc. For anything else than handheld cameras, there is a need for written permission from Metropolitan Transportation Authority. Their detailed policy is available on their website. <sup>3</sup> There were no restrictions on cellphones, photography, using flash or video recording at MoMath.

# **Gift Shop**

The Transit store museum has things targeted at kids, and there are some t-shirts for adults too with individual subway line alphabets or numbers. They can do a better job at Merchandise, or maybe this outlet is not that well-organized as there is another store at the Grand Central Terminal, which has miniatures of many trains and buses too. I have not visited that site personally, but intend to do so sometime.

MoMaths experience ends when you handover the entrance badge at the same place where you enter. There is a small game task they have here. You have to slip the badge through to another

<sup>&</sup>lt;sup>3</sup> Photography and Video Policy. New York Transit Museum. https://www.nytransitmuseum.org/photography/

slit kept below. Only one in 250 people achieve it according to their staff, and they get some free pens, pencils or other small items as free gifts. Their store is located further as you exit the museum. The store contains apparel, stationary, coffee mugs by MoMath, and also third-party vendor T-shirts which are themed on math concepts. They have many third-party vendor board games, interactive games, puzzles, cards and much more, all based on math, or sciences.

#### Staff

There were only staff members at both the museums, no security guards. There were overall three staff members at the Transit Museum, and they were all women. There were two in the gift shop and one woman at the check-in (to whom I paid the entrance fee). All of them were pretty unfriendly, and I can assume it's because of the kids who are running around.

The staff at MoMath were dressed in 'egg yolk' yellow t-shirts. On chatting with the staff at the gift store, I was told that there is a Math test which all the employee staff have to clear as a requirement. All of the staff have a background in math, they are either current students with math as majors, or are graduates in math.

# **Conclusion:**

The Transit museum experience is about time-travel, especially for people who grew up in New York City. You can hear a grandparent or parent say to their kids, "This was the subway I used in my young days". The histories about the different railways were brief without much detail and they did little to humanize the people who worked on these railroads or their passengers. Guess that's New York grandeur!

At MoMath, there are many things to do as kids and adults, but one may fail to understand the mathematical principles behind them, as they are seeing the results of the activities they perform. The museum basically does not accomplish its mission, it does a bad job of relating the underlying math to kids and the adults.