

***Cruisin' the Fossil Freeway***

Burke Museum of Natural History & Culture

Summative Evaluation

New Directions Project

Spring 2010

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Funded by



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## **Executive Summary**

Overall findings suggest that the *Cruisin' the Fossil Freeway* exhibit attracted a different audience than the audience which attended the *Coffee: The World in Your Cup* exhibit the previous year. Additionally, visitors were highly engaged within the exhibit, and were spending a great deal of time in the exhibit space. Visitors to *Cruisin'* felt strongly that the exhibit was able to successfully present scientific and educational content, but in a more creative and dynamic way than they're used to.

- Visitors to *Cruisin'* tended to be groups that included children, unlike the *Coffee* exhibit which attracted a higher percentage of adult-only audiences.
- Incoming visitors had a high interest in fossils: about 62% of *Cruisin'* visitors said they were more interested in fossils than artwork before coming to see the exhibit.
- Some visitors were coming specifically to see the artwork: about 28% were familiar with Ray Troll before coming to the exhibit and 68% of this group cited his art as a reason for their visit.
- Most visitors were not regular visitors: over 85% of visitors had never visited the *Coffee: The World in Your Cup* exhibit, and only 10% were Burke Members.
- Sweep Rate indicated that visitors to *Cruisin'* were highly engaged with the exhibit and spent around 19 minutes in both the *Cruisin'* and the *Evolution Evidence* exhibit space. This was comparable to visitor engagement with *Coffee* which was held in this same space in 2009.
- Overall, visitors felt that exhibiting educational material and topics in an entertaining and unconventional way was both effective and important.
- Visitors stopped most frequently in portions of the exhibit that had both art work and fossils as well as the introductory portion. These quadrants also contained items that were included in various scavenger hunt activities for the exhibit, unlike the Paleo Den, the Ammonite and the video.
- In comparison to the *Coffee* exhibit, visitors were less likely to view the *Cruisin'* video and they spent less time in the video room.
- The interactive element visitors engaged with the most were the 3D glasses (40%).

## **Introduction**

*New Directions*, an IMLS funded project in the University of Washington Museology Graduate Program, evaluated the traveling exhibition *Cruisin' the Fossil Freeway*. This exhibit was created by the Burke Museum of Natural History and Culture in Seattle, Washington and was open from December 19, 2009-May 31, 2010. The Burke Museum of Natural History and Culture is dedicated to creating a better understanding of the world and our place in it. Its collections, comprised of over 12 million specimens and artifacts, are utilized in exhibitions to educate and engage the public.

In *Cruisin' the Fossil Freeway*, the Burke presented specimens from their paleontology department alongside the art of Ray Troll. *Cruisin'* was based on the book of the same title written by paleontologist Kirk Johnson with illustrations from Troll. It tells the story of two men on a road trip searching for fossils throughout the Western US. The Burke also hosts a permanent exhibit called *Life and Times of Washington State*, featuring fossils and other evidence of Washington's past. *Life and Times* could be considered a more traditional natural history exhibit with a focus on fossils next to text. *Cruisin'* approaches the topic of fossils in a unique way by presenting them together with rich artwork.

Initial evaluation frameworks were created by New Directions students and staff members at the Burke Museum. The following report presents findings from both observational studies and exit interviews for the purpose of answering evaluation questions. All aspects of this research were reviewed and approved by University of Washington's Institutional Review Board for Human Subjects Research.

## **Evaluation Goal**

The goal of this evaluation was to continue to examine the Burke's audience by adding to a study done for an exhibit held in the same space in 2009, and to create a greater depth of research at the museum.

## **Research Questions**

This evaluation aimed to answer the following questions:

- In what way did the inclusion of art shape visitor attitude towards fossil exhibits?
- Was the *Cruisin'* exhibit attracting a specialized audience?
- What aspects of the *Cruisin'* exhibit attracted visitors the most?

**Literature Review**

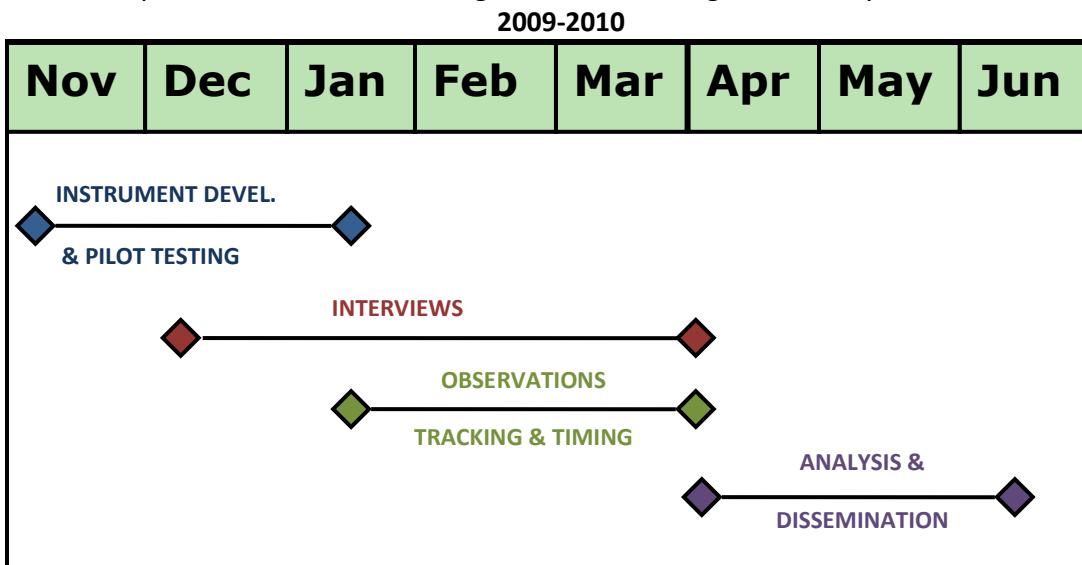
This project used summative evaluation with mixed methods to determine visitors' affective responses to the *Cruisin'* exhibit in comparison to *Life and Times*. In a 2010 study, the National Research Council reported the first strand of science learning in informal environments as a sparking of interest, motivation, and excitement. This evaluation examined affective responses as a measure of interest, which best fulfills Strand 1 of informal science learning.

In addition, the evaluation focusing only on *Cruisin'*, employed quantitative methods to examine the specific audience coming to the exhibit, building off of a study conducted on the *Coffee: the World in Your Cup* exhibit, previously set in the same space. This study also identified the specific aspects of the exhibit that were holding visitors the longest, and examined visitor behavior in comparison to visitors in *Coffee: the World in Your Cup*. Visitor engagement within the exhibit was measured using a Sweep Rate Index, as developed by Beverly Serrell (1998). This index uses a ratio of exhibit square footage to average time spent in the exhibit to assess relative visitor engagement within the exhibit as a whole.

**Methods**

***Timeline***

As part of the *New Directions* program, the evaluation occurred throughout the 2009-2010 academic year, in alignment with the quarter system. This project began in September 2009 with discussions with the site and advisors in order to create the evaluation goals and formulate the research questions. The later part of the quarter focused on instrument development as the *Cruisin' the Fossil Freeway* exhibit opened December 19, 2009. Pilot testing of the *Life and Times* interview began in the beginning of December 2009. Data was primarily collected during the winter quarter, mid-January to early March 2010, although some data collection occurred in late March. Data was processed and analyzed in April and May. The summative report was written and a presentation of the findings to the site was given in early June.



## **Sampling and Analysis**

This study collected data only from adult visitors. The random sampling method was consistent for both interviews and observations. School group chaperones and Burke employees were deliberately not interviewed or observed if they were identifiable. Basic demographics like relative age and gender of the subject and their group was taken with both data collection instruments.

The majority of observational data, and some interview data, were collected by a group of 10 graduate student researchers within the Museology Graduate Program. Project managers trained all graduate student researchers in data collection and data entry protocol (see Appendix A for Protocols). All data was analyzed by project managers using the Statistical Package for Social Sciences (SPSS).

## **Observations**

A random sample of 81 adult visitors were both timed and tracked within the *Cruisin'* exhibit between January-March 2010. Researchers used the map to track visitors throughout *Cruisin'*, noting stops of 3 seconds or more and use of exhibit interactives. When observing visitors, the first adult (either solo or within a group) to cross the designated entrance line to the exhibit was observed (see Appendix B for tracking map).

This map was also used to note entrance and exit times for the overall exhibit, and the ancillary *Evolution Evidence* exhibit in order to calculate Sweep Rate Index (SRI), a measurement of visitor engagement. *Evolution Evidence* was created to highlight the Burke's natural history collections and though it was a separate exhibit, the entrance was within *Cruisin'*. There was little to indicate to the visitors that *Evolution Evidence* was a different exhibit so separate timings for this area were necessary to examine the SRI.

## **Interviews**

Exit interviews were the main method for measuring affect and gathering more specific data on the audience coming to *Cruisin'*. Interviews were conducted for both exhibits to extract and compare data on visitor attitudes about fossils and the style of the exhibit. Most of the questions asked were the same for both *Life and Times* and *Cruisin'*, though *Cruisin'* had 3 additional questions (see Appendix B for interview instruments).

Exit interviews were conducted for *Cruisin'* and the Burke's permanent fossil exhibit, *Life and Times*, between January and April 2010. Researchers conducted 42 interviews for *Cruisin'* and 28 for *Life and Times*. Adult visitors were interviewed when exiting either exhibit and researchers only conducted interviews for one exhibit during each shift.

Particularly with *Life and Times*, data collectors were told to not ask anyone they did not see go into the exhibit. *Life and Times* had three possible entrances and if they did not go through the entire exhibit before being interviewed, the results would not be relevant. In *Cruisin'*, there was only one entrance and exit so the data collector was able to ask anyone exiting the space.

A word matrix was shown to visitors to allow them to self-identify and reflect upon their attitude toward the exhibit. Visitors were asked to choose 1-3 of the words shown or to offer words of their own. These words were randomly ordered, and their order was changed after half the interviews were conducted.

No visitor was interviewed for both *Cruisin'* and *Life and Times*. The refusal rate for both interviews was less than 6%.



## Results

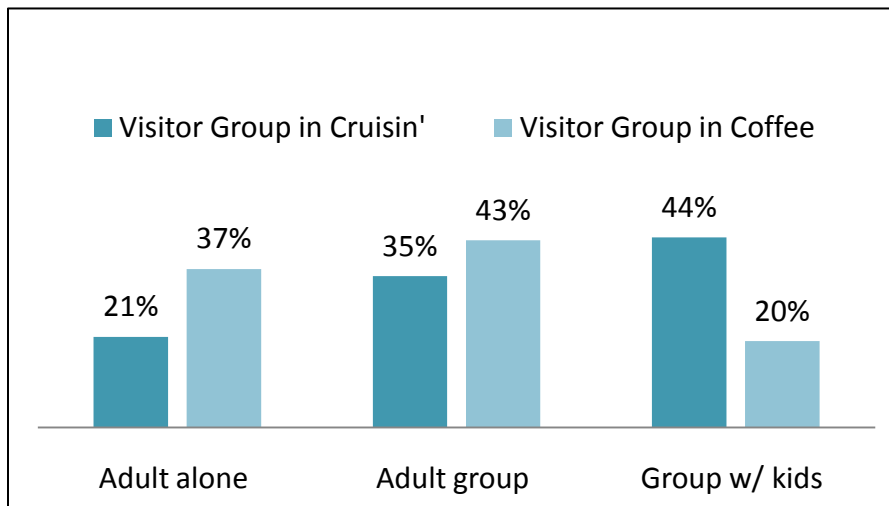
### Observations

Figure 1: Time Spent in Exhibit

|                | <i>Cruisin'</i> | <i>Cruisin' &amp; Evolution</i> | <i>Coffee</i> |
|----------------|-----------------|---------------------------------|---------------|
| Minimum (min.) | 0.23            | 0.23                            | 0.55          |
| Maximum (min.) | 64.47           | 69.33                           | 75            |
| Mean (min.)    | 14.85           | 19.92                           | 19.3          |
| Median (min.)  | 10.98           | 17.52                           | 14.8          |
| Sweep Rate     | 134.7           | 100.4                           | 103.6         |

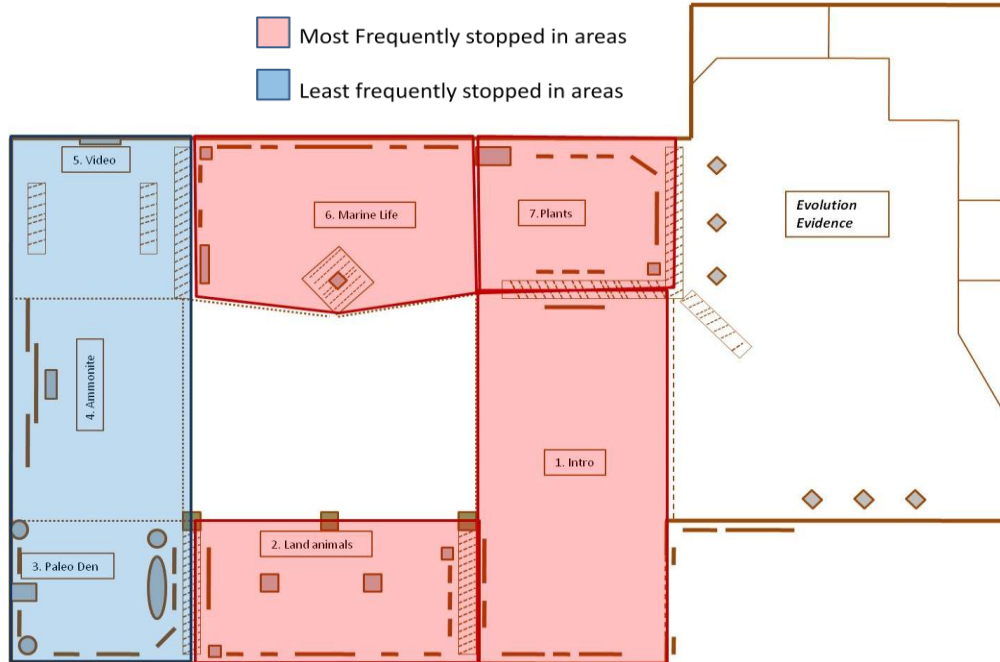
- A Sweep Rate of 100-150 indicates that visitors are highly engaged with the exhibit. Sweep Rate and average time spent in the *Coffee* exhibit was very similar to the results from *Cruisin'* and *Evolution Evidence* together, which is the same square footage.

Figure 2: Visitor Group



- The average group size was 3.6 people for *Cruisin'*. Visitor groups in *Cruisin'* tended to include children, versus *Coffee* where more visitors were single adult or adult groups.

**Figure 3: Frequency of Visitor Stops**



- Visitors tended to stop more frequently in the beginning sections of the *Cruisin'* exhibit. These portions did have more objects and artwork to look at, and items from the scavenger hunts could primarily be found in these areas.
- In comparison to the *Coffee* exhibit where 59% visited the video space, visitors in *Cruisin'* were less likely to visit the video (only 35%). Those who went into the video space spent an average of 3 minutes, in comparison to the *Coffee* exhibit where visitors spent an average of 8.4 minutes.

**Figure 4: Use of Interactives**

| Frequency of Interactive Use (N=81) |           |            |
|-------------------------------------|-----------|------------|
|                                     | Frequency | Percentage |
| <b>3D Glasses</b>                   | 33        | 40.7%      |
| <b>Audio Player</b>                 | 10        | 12.3%      |
| <b>Stuffed Animals</b>              | 11        | 13.6%      |
| <b>Books</b>                        | 16        | 19.8%      |
| <b>Chairs/Couches</b>               | 22        | 27.2%      |
| <b>Benches</b>                      | 5         | 6.2%       |
| <b>Burger Hunt</b>                  | 7         | 8.6%       |
| <b>Burke 101 Map</b>                | 4         | 4.9%       |

## **Interviews**

### **Why they came to the museum**

*Combined results:*

- 43% of visitors went to the museum to spend time with friends/family
- 40% went to see a specific exhibit
  - Of this group, 74% came to see *Cruisin'*
- 36% went to see the museum in general

### **Museums they tend to visit**

*Combined results:*

- 15% of visitors self identified as generally visiting all types of museums
- 15% visit natural history museums
- 22% visit art museums
- 18% visit natural history and art museums

### **Reason for visitation trends**

*Combined results:*

- 66% of visitors stated that they go to those types of museums for personal interest or the interest of a member of their group
- 23% of visitors stated logistics (location, cost, etc.) as a factor for their visitation
- 11% of visitors stated informal learning as a reason for their visitation

### Visitor Attitude Toward Exhibits

Figure 5: Matrix Responses

|                     | <i>Life and Times</i> (N=28) |            | <i>Cruisin'</i> (N=42) |            |
|---------------------|------------------------------|------------|------------------------|------------|
|                     | Frequency                    | Percentage | Frequency              | Percentage |
| <b>Educational</b>  | 19                           | 67.9%      | 24                     | 57.1%      |
| <b>Scientific</b>   | 15                           | 53.6%      | 13                     | 31%        |
| <b>Entertaining</b> | 9                            | 32.1%      | 20                     | 47.6%      |
| <b>Creative</b>     | 7                            | 25%        | 30                     | 71.4%      |
| <b>Whimsical</b>    | 0                            | 0%         | 15                     | 35.7%      |
| <b>Vibrant</b>      | 2                            | 7.1%       | 11                     | 26.2%      |
| <b>Social</b>       | 2                            | 7.1%       | 1                      | 2.4%       |
| <b>Confusing</b>    | 1                            | 3.6%       | 0                      | 0%         |
| <b>Peaceful</b>     | 7                            | 25%        | 6                      | 14.3%      |
| <b>Useless</b>      | 0                            | 0%         | 0                      | 0%         |
| <b>Unwelcoming</b>  | 0                            | 0%         | 0                      | 0%         |
| <b>Traditional</b>  | 2                            | 7.1%       | 1                      | 2.4%       |
| <b>Current</b>      | 0                            | 0%         | 1                      | 2.4%       |
| <b>Boring</b>       | 0                            | 0%         | 0                      | 0%         |
| <b>Valuable</b>     | 4                            | 14.3%      | 0                      | 0%         |
| <b>Other</b>        | 1                            | 3.6%       | 5                      | 11.9%      |

- The most chosen word for *Cruisin'* was “Creative” followed by “Educational”
- The most chosen word for *Life and Times* was “Educational” followed by “Scientific”
- Other responses:
  - *Life and Times*: “Welcoming”
  - *Cruisin'*: “Unconventional, humorous, fun, informative, cool”

Figure 6: Wordle of Matrix Responses for *Cruisin'*



**Figure 7: Visitor Reasoning for “Educational”**

|                                    | <i>Life and Times</i> (N=18) |            | <i>Cruisin'</i> (N=24) |            |
|------------------------------------|------------------------------|------------|------------------------|------------|
|                                    | Frequency                    | Percentage | Frequency              | Percentage |
| <b>Specific Fact/ Idea Learned</b> | 3                            | 16.7%      | 4                      | 16.7%      |
| <b>General Learning</b>            | 8                            | 44.4%      | 10                     | 41.7%      |
| <b>Exhibit Element</b>             | 6                            | 33.3%      | 1                      | 4.2%       |
| <b>Educational Atmosphere</b>      | 1                            | 5.6%       | 9                      | 37.5%      |

*Life and Times*: “All those plaques with info”

*Cruisin'*: “Given the creative/whimsical aspects, it still conveys a lot of information in a digestible and entertaining way”

- Visitors in *Life and Times* mainly chose **Educational** because the topic of the exhibit and the material presented in it was inherently educational (general learning) whereas visitors to *Cruisin'* often cited the fact that the exhibit was educational, but in a different and more creative way (educational atmosphere).

**Figure 8: Visitor Reasoning for “Entertaining”**

|                               | <i>Life and Times</i> (N=9) |            | <i>Cruisin'</i> (N=20) |            |
|-------------------------------|-----------------------------|------------|------------------------|------------|
|                               | Frequency                   | Percentage | Frequency              | Percentage |
| <b>General Atmosphere</b>     | 3                           | 33.3%      | 7                      | 35%        |
| <b>Exhibit Element</b>        | 2                           | 22.2%      | 6                      | 30%        |
| <b>Educational Atmosphere</b> | 4                           | 44.4%      | 7                      | 35%        |

*Life and Times*: “It was entertaining to see skeletons; education should be entertaining”

*Cruisin'*: “It tried to discuss dinosaurs in an engaging way, to keep attention rather than have exhaustive detail and knowledge”

- While visitors did describe both exhibits as **Entertaining**, they continued focus on the idea of education occurring through entertaining means rather than just describing the exhibits as cool or fun.

**Figure 9: Visitor Reasoning for “Scientific”**

|                 | <i>Life and Times</i> (N=15) |            | <i>Cruisin'</i> (N=12) |            |
|-----------------|------------------------------|------------|------------------------|------------|
|                 | Frequency                    | Percentage | Frequency              | Percentage |
| <b>General</b>  | 7                            | 46.7%      | 7                      | 58.3%      |
| <b>Specific</b> | 8                            | 53.3%      | 5                      | 41.7%      |

*Life and Times*: “I learned a lot about movements and ash and how that all changed the state”

*Cruisin'*: “Obviously the people who came up with this stuff are scientists, like paleontologists”

- Visitors in *Cruisin'* often explained their choice of **Scientific** by citing the overall topic of the exhibit. In *Life and Times*, visitors tended to use specific scientific facts or topics to explain their choice.

**Figure 10: Visitor Reasoning for “Creative”**

|                           | <i>Life and Times</i> (N=7) |            | <i>Cruisin'</i> (N=30) |            |
|---------------------------|-----------------------------|------------|------------------------|------------|
|                           | Frequency                   | Percentage | Frequency              | Percentage |
| <b>General Atmosphere</b> | 1                           | 14.3%      | 16                     | 53.3%      |
| <b>Exhibit Element</b>    | 3                           | 42.8%      | 13                     | 43.3%      |
| <b>Audience</b>           | 3                           | 42.8%      | 1                      | 3.3%       |

*Life and Times*: “I like how the different displays were meaningful to children and useful to adults, since they were at an adult level.”

*Cruisin'*: “It interwove so many different things together and works for both the artistic and scientific people to better understand the other.”

- **Creative** was often chosen due to the artwork and the overall feel of the *Cruisin'* exhibit, while in *Life and Times* it was chosen because the exhibit was seen as appealing to adults and children.

### **Most likely to talk about with friends or family**

- In the *Life and Times* exhibit, 28% of people (8 visitors) suggested they would likely talk about the dinosaurs, 18% (5) would talk about the other fossils or bones, 14% (4) would talk about the exhibit as a whole or its concept.
- In the *Cruisin'* exhibit, 33% (14) stated they would likely talk about the exhibit as a whole or its concept, 29% (12) would talk about the art, and 24% (10) would talk about the fossils.

### **Interest in seeing artwork or fossils**

- For interviewees at the *Cruisin'* exhibit, 62% (26) were more interested in seeing fossils before going into the exhibit, 17% (7) were more interested in the art, and 17% (7) were interested in both.

### **Familiarity with artist Ray Troll**

Combined results:

- 28% of visitors (n=67) said they were familiar with Ray Troll's artwork before their visit to the museum.
- Out of those that were familiar with Ray Troll, 26% (5) stated that he was the main reason for their visit, 42% (8) stated that he was one of the reasons for their visit, 32% (6) stated that he was not a reason for their visit.

### **Evolution Evidence**

- In the interviews, 90% of visitors (n=41) stated that they went through the *Evolution Evidence* exhibit.
- From observations, 80% of visitors (n=81) entered *Evolution Evidence*.

### **Visitation to *Life and Times* and *Cruisin'***

*Life and Times*:

- 38% (10) of visitors to *Life and Times* had gone through *Cruisin'* before entering *Life and Times*.
- 100% of visitors to *Life and Times* who had not yet seen *Cruisin'* stated they would go through *Cruisin'* some time during their visit to the museum.

*Cruisin'*:

- 37% (15) of visitors to *Cruisin'* had gone through *Life and Times* before entering *Cruisin'*.
- 76% (19) of visitors to *Cruisin'* who had not yet seen *Life and Times* stated they would go through *Life and Times* some time during their visit to the museum.

**Coffee: The World in Your Cup**

- 85% of visitors to *Cruisin'* (n=41) never visited the *Coffee: The World in Your Cup* exhibit.
- 90% of visitors to both exhibits (n=67) had not visited the *Coffee* exhibit.

**Coffee drinking habits in an average week**

- 79% of visitors to *Life and Times* and *Cruisin'* said they drink coffee.
- 91% of visitors to the *Coffee* exhibit said they drink coffee.
- There is no significant difference between visitors to *Cruisin'* and visitors to *Coffee* in terms of the regularity of coffee drinking.

**Figure 11: Frequency of Coffee Drinking**

| Cups of coffee per week | Cruisin' (n=41) |            | Life and Times and Cruisin' (n=67) |            | Coffee (n=79) |            |
|-------------------------|-----------------|------------|------------------------------------|------------|---------------|------------|
|                         | Frequency       | Percentage | Frequency                          | Percentage | Frequency     | Percentage |
| 1-3 cups                | 4               | 9.8%       | 4                                  | 6%         | 14            | 17.7%      |
| 4-7 cups                | 12              | 29.3%      | 20                                 | 29.9%      | 22            | 27.8%      |
| 8-14 cups               | 13              | 31.7%      | 16                                 | 23.9%      | 19            | 24.1%      |
| >15 cups                | 9               | 22.0%      | 13                                 | 19.4%      | 17            | 21.5%      |
| Never/Rarely            | 3               | 7.3%       | 14                                 | 20.9%      | 7             | 8.9%       |

**Burke Membership**

- 10% (4) of visitors to *Cruisin'* were Burke members.
- 12% (8) of total visitors interviewed were Burke members.



## **Discussion**

The data suggests that the artwork in the *Cruisin' the Fossil Freeway* exhibit did attract a more specialized audience for the Burke Museum, and that they were successfully engaged within the exhibit. Many visitors felt it was important for educational exhibits, such as those about fossils and evolution, to have an entertaining element to them. This summative evaluation suggests that the *Cruisin'* exhibit was able to present the topic of fossils and prehistory in an alternative way while successfully engaging new audiences and continuing to reach visitors with a deep interest in fossils.

## **Limitations**

- Sampling occurred primarily in the afternoons and weekends over 3 months, dependent upon the schedules of student researchers.
- The majority of data was collected by graduate students who received a small amount of training and some inconsistencies did occur.
- Interview sample size was not statistically significant.

## **Future Research**

- Continued tracking and timing research in the same exhibit space will build on these two studies at the Burke and will make it possible to conduct research on a more longitudinal scale.
- This study only looked at visitor behavior in terms of movement within the exhibit and whether or not they were using any of the interactive elements. There is potential for richer observational studies in visitor behavior. For example, examining the prevalence of intergenerational dialogue or discussion could be a very interesting study.
- While it was not a goal of this study to closely examine *Life and Times*, there are many possible studies which could be conducted on this exhibit. Visitors seem to be very attached to the permanent exhibit, and it will be important to conduct further research on it should the Burke decide to change or remodel it in the future.
- Both of the exhibits evaluated by New Directions were designed by the Burke Museum and have since traveled to other locations. Building evaluation into the traveling exhibits created in-house could provide some important insights. It will be interesting to track similarities and differences as these exhibits travel to different kinds of institutions who have potentially very different audiences.

## **Research Team**

### **Project Managers**

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### **Project Support**

|                     |                              |                          |
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| Nick Visscher       | New Directions Coordinator   | University of Washington |
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| Kathryn Owen        | Audience Research Supervisor | Woodland Park Zoo        |

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## **Appendix A: Data Collection Protocols**

### **Interviews**

#### **Signing In**

1. Sign In on the sheet in the Student Center
2. Grab a clipboard with blank interview sheets for either *Life and Times* or *Cruisin'*. Make sure the matrix is attached to the clipboard and you have a card for Question 1.

#### **Data collection**

3. Position yourself near the entrances/exit to *Cruisin' the Fossil Freeway* or *Life and Times*
4. Approach the first adult visitor to cross the threshold of the exhibit as they are exiting; for *Life and Times*, if you don't remember seeing them enter, don't interview them
  - a. Read the introductory phrase on the top of the interview sheet
  - b. Let visitors know the interview will only take a few minutes
  - c. Fill in all researcher info at the top of the map. The subject you are tracking should be included in the group
  - d. Direct questions towards one person only, make note of other group members who prompt your subject or answer the questions
  - e. Throughout, follow prompts as written
5. After completing an interview, reposition yourself so that you can approach the next adult that exits the exhibit
6. Throughout, keep a tally of the number of people you approached that declined to be interviewed. Make note of this number on the Sign In sheet in the Student Center
7. Allow time for data entry

#### **Data Entry**

8. Enter in your interview data down in the Student Center before you sign out
  - a. The Interview Data Sheet can be found here (choose either *Life and Times* or *Cruisin'*): <http://sites.google.com/site/newdirectionsproject/Home/burke-museum>
  - b. After clicking the link, click on the "Form" menu. From there, select "Go to live form"
  - c. This should take you to a form. Fill out all the fields, following the directions.
  - d. Click the submit button. This should take you back to the spreadsheet view.
  - e. Find the ROW number that accompanies the data you just entered. Physically write this number in the upper right-hand corner of your interview sheet.
  - f. ONLY INTERVIEWS THAT HAVE BEEN ENTERED IN THE SPREADSHEET SHOULD HAVE NUMBERS WRITTEN ON THEM

#### **Signing Out**

9. Sign out on the sheet in the Student Center
10. Return all materials to the box
  - a. Place completed interviews in the appropriate large envelope labeled "Interview Data"
  - b. If you don't have time to enter your interviews into the form, place them in the envelope labeled "Interviews to be Entered" and enter the data next time you are in the Student Center. ( DON'T TAKE DATA SHEETS OUT OF THE BURKE)

## **Observations**

### **Signing In**

1. Sign In on the sheet in the Student Center
2. Grab a clipboard with blank maps, a timer, and a pen/pencil

### **Data collection**

3. Position yourself near the entrance to *Cruisin' the Fossil Freeway*
4. Begin tracking the first adult that crosses the solid black line on the floor
  - a. Be sure to note entrance and exit times in the hh:mm:ss format, and in 24 hour time (DO NOT PUSH ANY BUTTONS ON THE TIMER)
  - b. Fill in all demographic data at the top of the map. The subject you are tracking should be included in the group.
  - c. Unobtrusively follow your subject throughout the exhibit
  - d. Place an X on the map at each spot the subject stopped for more than 3 seconds
  - e. Note the use of any of the interactive elements within the exhibit
  - f. Make note of any other interesting behaviors or variables in the Notes section
5. After completing a tracking, reposition yourself so that you can see the intro section of the exhibit and begin tracking the next adult that crosses the black line
6. Allow time for data entry

### **Data Entry**

7. Enter in your observational data down in the Student Center before you sign out
  - a. The Observation Data Sheet can be found here:  
<http://sites.google.com/site/newdirectionsproject/Home/burke-museum>
  - b. Be sure to fill out all fields, following the example
  - c. Assign each completed map a record number on the spreadsheet (these should go in ascending order) and physically write this number in the upper right corner of your map
  - d. ONLY MAPS THAT HAVE BEEN ENTERED IN THE SPREADSHEET SHOULD HAVE NUMBERS WRITTEN ON THEM

### **Signing Out**

8. Sign out on the sheet in the Student Center
  - a. Make note of any situations we should be made aware of on the sign in sheet (ie there was a school group in the exhibit the whole time you were there, or no one came in)
  - b. Return all materials to the box
  - c. Place completed maps in the large envelope labeled "Observational Data"
  - d. If you don't have time to enter your maps into the spreadsheet, place them in the envelope labeled "Maps to be Entered" and enter the data next time you are in the Student Center
  - e. DO NOT TAKE ANY DATA SHEETS OUT OF THE BURKE

## Appendix B: Data Collection Instruments

### *Life and Times interview*

Date: \_\_\_\_\_ Circle one: Morning/Afternoon Researcher: \_\_\_\_\_

Total Group (including interviewee): \_\_\_\_\_ Interviewee: \_\_\_\_\_

Key: M: Adult Male F: Adult Female g: girl b: boy

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**Intro:** *Hi, would you be willing to answer a few quick questions, we're interested in your thoughts and reactions to the exhibit you just went through. [Pause for response, if yes, proceed] This is voluntary so if there is anything you are not comfortable answering we can skip that question.*

**1a.** *I'm going to show you a card, choose the letter or letters that best describe why you came to the museum today. [Circle the responses]*

- A. To spend time with friends and family.
- B. Interested in a specific exhibit at the Burke.
- C. Came to see the museum, not a specific exhibit.
- D. Other (please explain)

**1b.** *[If B, ask: Which exhibit were you interested in seeing and why?]*

**2.** *In general, what kind of museums do you visit? [if hesitating, prompt with list: zoos and aquariums, natural history, art, science centers, history, children's museums, etc.]*

**3.** *Why do you think you visit \_\_\_\_\_ more than other kinds of museums?*

**4.** *Bring out the matrix, ask them to choose 1 – 3 words that best describe how they feel about the exhibit they just went through.*

Words they chose: 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

**5.** *Ask them why they chose these words.*

Reasoning: 1.

2.

3.

**6.** *What part of this exhibit are you most likely to talk about with friends or family?*

(on bottom of 2<sup>nd</sup> page)

**Last questions:** *These last questions don't have anything to do with this exhibit, but they will help us with our ongoing research at the Burke,*

**7a. Were you familiar with Ray Troll's artwork before coming to the museum today?**

**7b. If yes, ask: To what extent was his artwork a reason for your visit today? [Circle answer]**

**Main Reason**

**One of the Reasons**

**Not at All**

**8a. Have you visited the *Cruisin' the Fossil Freeway* exhibit today?**

**8b. If response is no, ask: were you planning on going through the exhibit later in your visit?**

**9. Last year in this same space, the Burke hosted an exhibit "Coffee: The World in Your Cup" did you visit it? [Circle answer]      Yes      No**

**10. In an average week, how often do you drink coffee?**

- 1-3 cups
- 4-7 cups
- 8-14 cups
- 15 or more cups
- Never

**11. Are you currently a Burke member?**

**Cruisin' Interview**

Date: \_\_\_\_\_ Circle one: Morning/Afternoon Researcher: \_\_\_\_\_

Total Group (including Interviewee): \_\_\_\_\_ Interviewee: \_\_\_\_\_

Key: M: Adult Male F: Adult Female g: girl b: boy

---

**Intro:** *Hi, would you be willing to answer a few quick questions? This is a new exhibit for the Burke and we'd like to get your thoughts and reactions to it. [Pause for response, if yes, proceed] This is voluntary so if there is anything you are not comfortable answering we can skip that question.*

2. *I'm going to show you a card, choose the letter or letters that best describe why you came to the museum today. [Circle the responses]*
- A. To spend time with friends and family.
  - B. Interested in a specific exhibit at the Burke.
  - C. Came to see the museum, not a specific exhibit.
  - D. Other (please explain)

**[If B, ask: Which exhibit were you interested in seeing and why?]**

2. **In general, what kind of museums do you visit? [if hesitating, prompt with list: zoos and aquariums, natural history, art, science centers, history, children's museums, etc.]**

3. **Why do you think you visit \_\_\_\_\_ more than other kinds of museums?**

4. **Bring out the matrix, ask them to choose 1 – 3 words that best describe how they feel about the exhibit you just went through.**

Words they chose: 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

5. **Ask them why they chose these words.**

- Reasoning:
- 1.
  - 2.
  - 3.

6. **What part of this exhibit are you most likely to talk about with friends or family?**

7. **Before going through this exhibit, were you more interested in seeing artwork or fossils?**

8a. **Were you familiar with Ray Troll's artwork before coming to the museum today?**



**8b. If yes, ask: To what extent was his artwork a reason for your visit today? [Circle answer]**

|  | Main Reason | One of the Reasons | Not at All |
|--|-------------|--------------------|------------|
| 9. Did you go into the Evolution Evidence Exhibit? [Circle answer] | Yes         | No                 |            |

(on bottom of 2<sup>nd</sup> page)

**Last questions:** *These last questions don't have anything to do with this exhibit, but they will help us with our ongoing research at the Burke,*

**10a. Have you visited the *Life and Times of Washington State* exhibit today?**

**10b. If response is no, ask: were you planning on going through the exhibit later in your visit?**

**11. Last year in this same space, the Burke hosted an exhibit "Coffee: The World in Your Cup" did you visit it? [Circle answer]**      Yes      No

**12. In an average week, how often do you drink coffee?**

- 1-3 cups
- 4-7 cups
- 8-14 cups
- 15 or more cups
- Never

**13. Are you currently a Burke member?**

**Matrix Word Choices for Interviews**

|                    |                     |                 |                   |
|--------------------|---------------------|-----------------|-------------------|
| <b>Educational</b> | <b>Unwelcoming</b>  | <b>Vibrant</b>  | <b>Social</b>     |
| <b>Confusing</b>   | <b>Peaceful</b>     | <b>Useless</b>  | <b>Creative</b>   |
| <b>Traditional</b> | <b>Entertaining</b> | <b>Current</b>  | <b>Scientific</b> |
| <b>Whimsical</b>   | <b>Boring</b>       | <b>Valuable</b> | <b>★</b>          |

Observation Instrument

**Cruisin' Exhibit Tracking Map**      Date: \_\_\_\_\_      Researcher: \_\_\_\_\_

Visitor: **M** or **F**      Group (including Visitor): \_\_\_\_\_ [key: M, F, g, b]

Time in \_\_\_\_\_      Time out \_\_\_\_\_

Time in Video \_\_\_\_\_      Time out Video \_\_\_\_\_

Time in Evolution Evidence: \_\_\_\_\_      Time out Evolution Evidence: \_\_\_\_\_

**Notes:**

**Coding**

→ : Indicate direction of travel  
**X**: Stop, if they stand/sit for more than 3 seconds

**Interactions:**

- 3-D glasses
- Audio player
- Books (reading alone or with others)
- Stuffed Animals
- Sit in chair(s)