Moving Clocks and Bending Space: A Learning/Interactive Museum Environment (LIME)

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Abstract

The process of creating a successful exhibition at the American Museum of Natural History involves a dialogue between those who research the science, those who create the content's presentation and the audience. This panel explores creation and evaluation of two non-traditional exhibits (Moving Clocks and You Bend Space-Time) created for the current Einstein exhibition. The panel describes the scientific and philosophical ideas that fueled their conception, explains the design and technological choices, and examines how educational media experiences are evaluated.

Introduction

The Exhibition Media department at the American Museum of Natural History has existed for more than eight years and has created increasingly more complex and experiential exhibitory. Museums and other science centers have a growing great desire for compelling new media. With this desire comes responsibility to both engage the public and stay true to science. Over the years, we have come to question the nature of our own work in an effort to better understand its significance and impact. We are particularly curious about the success or lack of success of media and how it's evaluated. How is an exhibit conceived and created? What is the process? How do we know if an exhibit is a success or failure and what criteria do we use to make that determination? How do we break away from traditional education methods to reach people for whom those methods have been unsuccessful? How do we define education? In a setting without an instructor, how do we get people to focus and learn complex material?

We will look at two examples: "Moving Clocks" and "You Bend Space-Time" both from the recent exhibit *Einstein* to explore these questions.

Exposition

The installation "Moving Clocks," combines animation, wall text and an electronic sculpture to form an educational experience. The objective here is to demonstrate that time is a variable. The second piece, "You Bend Space-Time," is an installation comprised of a linear animation, wall text and large interactive wall. The objective here is to demonstrate that mass distorts space-time. Both of these examples are prime illustrations of inventive ways to create a learning environment.

We will examine how media experiences such as these are evaluated. Ideally, evaluation is a dialogue between the audience and exhibit developers to better inform them of what makes learning experiences successful. As we employ new forms of media, new methods for evaluating those media are needed. Under consideration are:

- Defining criteria for evaluating media experiences.
- Defining and recognizing successes and failures of media.
- Determining the target audience and what that group already knows.
- Inspiring mindful attention.
- Creating a language upon which to build.

Following an in-depth evaluation of the design and execution of these exhibits and the evaluation process, we will open up the floor for feedback and discussion.

Anticipated experience level (novice, intermediate, advanced, expert)

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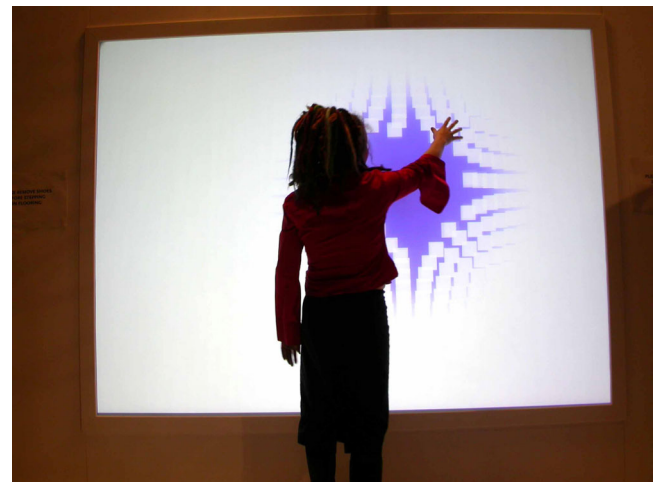**Figure 1.** *You Bend Space-Time* **interactive wall**

Figure 2. *Moving Clocks* **educational installation**