

Prototype Documentation

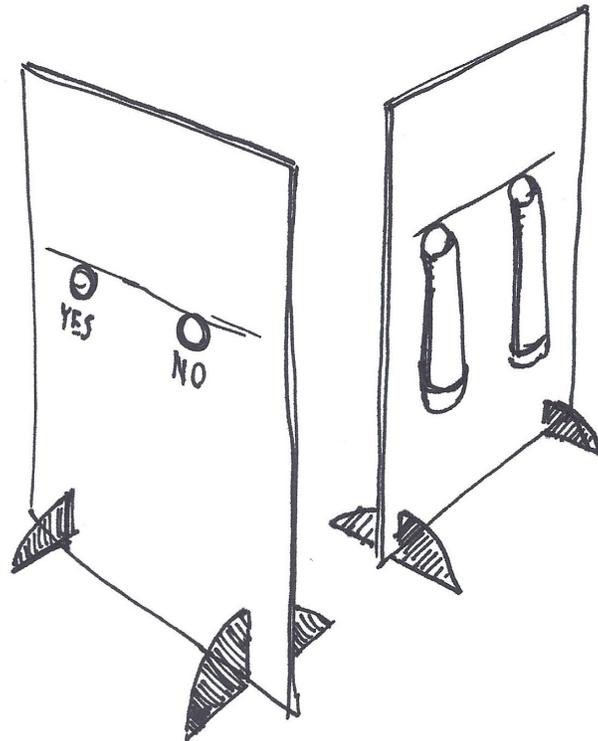
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## Marble Drop Voting Machine

### Experiential Goals

Our goal for the user was that they discuss or think about contemporary prison issues, and share their opinions on such issues.

Our secondary goal was to create a reveal upon voting of the percentage of visitors who had voted so far, to create an incentive for participating.



### Communication Goals

Our communication goal was simple: to convey that ESP is aware of contemporary prison issues and interested in creating a public dialog around them.

### Locations

We first tried the rotunda, and then moved to cell block 9, after finding that visitors were too preoccupied with their audio guides to pay attention to anything else in the rotunda. Cell block 9 proved a successful location - it was toward the exit, when visitors had finished their audio

tour. Visitors were much more inclined to stop and engage in the prototype, and seemed happy to stay for a few minutes and provide us with some feedback.



### **ESP's Requests**

Our Marble Drop Voting Machine meets two of ESP's goals:

#### **How to make statistics for current corrections issues memorable?**

Our prototype creates visual impact (with a physical, kinetic structure), and invites visitors to interact with the data.

#### **Collecting visitors' opinions, sharing visitors' opinions.**

Our prototype collected and shared visitors' opinions with one action: the drop of the marble.

### **What Worked/What Didn't Work**

We chose to focus on the Marble Drop for a few reasons. We had tried prototyping two different ways of visualizing current corrections statistics, but we felt that just the visual representation was not enough to invite dialog. We tried two prototypes of visual statistics: Floor Lines, showing that the US is the leader in world prison population, and Stencil Statistics, showing the increase in prison population in the US between 1970 and today.



Most visitors walked by without stopping to look at the information, and when we tried explaining what the graphic represented in our Stencil Statistics (the increase in US prison population between 1970 and 2012), we did not get much of a reaction. It became clear that infographics portraying statistics need to have more layers of information to contextualize the statistics, and they need to be organized in an extremely logical and eye-catching way to have any impact.

However, we did learn some valuable lessons as we tested both statistic prototypes:

1. Signage is important. Even a straightforward-looking exhibit may need a sign to invite participation.
2. Location is important. If visitors are at the beginning of a museum experience, they are less willing to stop and investigate something that looks experimental. It is best to place prototypes so that visitors have already been exposed to basic ideas about incarceration.
3. In order to understand what, if anything, visitors are getting from an exhibit, it is necessary to ask them questions. Observation alone is not enough to understand visitor experience.

Since we didn't have the time or the resources to continue to develop our infographics to the extent necessary, we decided that making the information interactive would be a more efficient way to get the point across. We also felt that since the context for the prototype was a museum (and an experience-heavy one like ESP), the content should be interactive.

## Observations

As we prototyped our final exhibit, we observed lots of visitors interacting with it, both from a fly-on-the-wall perspective and as we actively engaged with them. The visitors we observed unobtrusively seemed to consider the information and the question, and then thoughtfully cast their vote. Before we added directional signs, visitors were less sure of what to do or how to interact with the exhibit. When we asked visitors what they thought of the exhibit after interacting with it, the majority of them understood the information and were happy with the options they were provided with.



One highlight from our observations was hearing a mom explaining to her two young kids what the information meant (when we prototyped the US versus world prison population statistic), and encouraging them to share their opinion, which they did.

One ESP employee recommended we make the phrasing of the statistical information more clear. Instead of phrasing the info as two separate statistics (“The United States makes up 5% of the world population. But the United States’ prisoners make up 25% of the world’s prison population.”), we could have phrased it as one sentence, for example: “America imprisons more people than any other country in the world.”

## Questions Answered

A common thread through all of our prototypes was a question of signage. How much is needed to invite participation? We found that directional signage (ie. Look! We need your input,

Take a marble, etc.) is necessary, even when the interaction seems obvious.



We also tested for visitor interest. Are people interested, on a basic level, in current statistics and theories surrounding corrections? Based on our observations of our final prototype, we can conclude that people are genuinely interested in these topics. Many visitors would discuss the questions with each other before casting their vote, and seemed to really consider their options.

### **Remaining Questions**

We were unable to test for the value of the marble drop reveal. Was the reveal an incentive to participate, or was it just confusing? Is the reveal something that should be incorporated into future prototypes or designs?

We also would have liked more time to test other questions, and how the formatting of the question impacts visitor understanding. Which questions are best at encouraging dialog and inspiring visitors to learn more?

### **What would we do differently?**

Further prototyping around the unanswered questions would be really valuable. If we had the chance to continue prototyping, we would incorporate a more structured form to record visitor feedback in surveying. Visitor input is key, and having a defined list of questions to ask would create a very useful set of data for the museum.

### **Materials**

We constructed our second iteration out of plywood, so that it felt more substantial. The first prototype was constructed out of cardboard, so it felt flimsy and too crafty. The appearance may have discouraged visitors from interacting with it. The plywood iteration still had a crafty feel, but we spent more time on construction. We felt that it had just enough authority to help visitors feel comfortable walking up to it on their own, while still being casual enough so that visitors felt free to share their honest opinions both in voting and in feedback to the team. We wonder how visitor interaction will change if the exhibit is taken into the next stage of development. Will a more professional construction still invite honest opinion?

## **Recommendations**

We feel that ESP could really benefit from an interactive exhibit that incorporates content on current corrections statistics and theories. We would recommend that the museum test more corrections-based questions, to determine which types of questions, and how they are asked, create the most dialog.

We would also recommend testing the importance of the reveal in the marble drop - is it necessary in visitor engagement? Additionally, the questions and answers that are being voted on can and should be tied to current events and newspaper headlines specific to Philadelphia.

Finally, the exhibit should be designed so that engagement happens over a period of time. For example, the museum should think about what happens after the vote: do the options change monthly based on visitor feedback? Is there a take-home product showing voting results? How will visitors be encouraged to return to ESP (the museum or the website) to check up on voting results or new questions? Is there an online component to the voting mechanism? These questions should be explored in future prototyping.