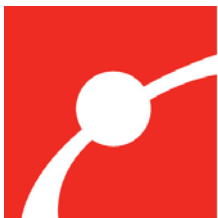# *Reaching Out to New Audiences in Our Science, Technology and Society Discussion Programming*

Research Study / Front-end evaluation

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National Center for Technological Literacy®

Museum of Science, Boston

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EXECUTIVE SUMMARY

Forum is a program at the Museum of Science that promotes the exchange of different perspectives on topics in science, technology, and society through small group discussion. At previous *Forums* held at the Museum of Science, attendees were typically recent Museum visitors. Certain types of participants, such as individuals from politically conservative groups or individuals from lower income and/or lower socioeconomic levels, were not observed as attending. Hence, this study aims to explore various groups' perceptions of the *Forum* program.

To assess their perception of the *Forum* program, five focus groups were held with volunteers at the Museum of Science, members of a Republican interest organization, members of a working women's group, students in a technology training program, and career counselors speaking on behalf of their clientele, who are typically low income and/or have disabilities. Participants were asked about what types of conversations they already have about science and technology, their perceptions of two existing *Forums*, and their suggestions on how to increase the likelihood of members from their community to attend.

Findings revealed that only one of the participants had heard about the *Forum* program prior to the focus group, but participants would be interested in attending *Forum* if some modifications were made to the program. The Republican focus group and to a lesser degree, the volunteer focus group advocated for multiple perspectives with interdisciplinary, celebrity speakers. The career counselor, working women's group, and technology training group suggested holding local neighborhood forums on topics they face in their everyday lives, and providing a bonus of free admission to the Museum. All focus groups suggested having attractive advertising and easily accessible locations to hold the forum.

Based on participants' suggestions, two types of forums serving two types of audiences arose: an informational and practical forum, in which basic, actionable information is disseminated, and a controversial forum, in which multiple viewpoints are presented by well known individuals and discussed. We suggest that the two forums could be complementary with the informational forum leading up to a more controversially oriented program. This matter warrants further investigation by both researchers and program organizers and highlights the need for potential partnership with a board to consult on issues like advertising, topic choice, and format design.

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I. INTRODUCTION

1. Diverse voices are central to deliberative dialogues

In museums across the country, the general public is gathering to share their opinions on controversial issues related to exhibitions. Such public programs have been set up to accompany exhibitions like the Andy Warhol Museum's *Without Sanctuary*, the Henry Art Gallery's *Gene(sis): Contemporary Art Explores Human Genomics,* the Jewish Museum's *Mirroring Evil: Nazi Imagery/Recent Art* (Korza & Bacon, 2005), the Museum of Science's hosting of *BODYWORLDS 2,* and most recently the Science Museum of Minnesota's *Race* exhibition.

Similarly, the Museum of Science's *Forum* program creates discussion on a myriad of topics, some directly related to exhibitions and some not, and all of which focus on the relationship between technology and society. The program shifts the focus away from a deficit model of communication, where only scientists have the important voice, to a civic engagement model where the community's voice is also significant (Reich, Chin & Kunz, 2006). While there are presentations made by scientists and/or field experts, *Forum* adopts a cultural anthropological standpoint and a social constructivist approach in which multiple ways of thinking about the topic are welcomed and accepted (Lee, 1999). Through small group discussion, participants draw upon their own knowledge and experiences, hear from a range of knowledgeable members of their group, and build a collective knowledge of the topic. In this process, participants are practicing principles that are fundamental to a democratic society, that decisions are based not only on one's own opinions, but others' opinions as well. All together, through *Forum*, it is hoped that participants become more technologically literate and better able to make decisions in their lives as related to science, technology, the environment and society. Thus, a diverse range of individuals is important to helping make the program successful given the underlying theories of *Forum* and public education model it has.

2. History of underrepresented minorities in museum visitorship

Museums have historically struggled with attracting an audience that is diverse into its doors, including people of all abilities and disabilities, ages, incomes, geographic locations, sexual orientations, religious and value backgrounds, and races and ethnicities. A fair amount of literature exists on how to increase visitor diversity at museums, particularly in racial and socioeconomic terms. To attract the African-American community, Falk (1995) recommended that museums tap into churches' strong relationships with the community, seek out whole families to attend the museum instead of field trip groups, and understand that changing visitor demographics is a slow process. In his commentary about how evaluation can strengthen diversity in museum programs, Storcksdieck (2005) recommended word of mouth as an effective method among underrepresented minorities. Elaine Gurian (2006) has observed that

"programs for special audiences" tend to address how to better use the institution and its resources and/or serve as social support centers. These efforts often include exhibit spaces that help parenting: professional training programs; job opportunities for the poor, teenagers and mentally ill; literacy programs; crafts' fairs and markets in the museum; dental and medical screenings; mobile museum visits to elderly housing; and day care centers housed in the museum (p.82).

Financially-based access programs are another popularly utilized resource. They typically have been sponsored by large corporations like Bank of America or Target Corporation, and admission to museums is free on certain days, months or times. The Museum of Science, Boston offers discounted admissions through its library passes and free programs through private funding from the Lowell Foundation. There are also some relatively new programs like Cool Culture, a non-profit organization in New York City which endorses a pass program among families with children enrolled in Head Start-subsidized preschools that provides free admission to a host of museums around the city. Admission to local museums remains free as long as the card remains active each year.

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3. Current study: Research questions

The Museum of Science forums held thus far have focused on topics like energy, obesity, urban transportation, bionics and prosthetics, and nanotechnology. Each forum varies in format, but forums typically include presentations from field experts, question and answer sessions, and a small group discussion section. At these forums, participants have been of diverse ages and to varying degrees, different ethnicities and abilities. These dimensions of diversity have varied by topic and to some extent, by location of the forum (e.g., a local community college as opposed to the Museum). However, certain demographics have remained consistent: the program is largely attracting individuals who have a standing relationship with the Museum. Evaluation at the *Urban Transportation* (88%) and *Bionics* (83%) forum series, for example, reveals nearly all individuals had visited the museum within the past two years and that Hispanics (3%) and African Americans (which ranged from 2 to 5%) were very underrepresented. From observations, certain groups of individuals have been missing from this discussion, including people who have lower levels of educational achievement and individuals who promote very conservative points of view.

With a desire to increase the presence of diverse groups at *Forum*, this research study was undertaken to identify common elements that would make a *Forum* comfortable and interesting experience for a wide range of individuals. The research questions were:

1. How do different populations conceptualize the *Forum* project as it currently exists as being an appealing program for them?

2. How do we design a forum program (in terms of format, topic, time, location, and marketing) that is appealing and comfortable to the broadest range of audiences?

3.1 Taking an inward look: Practicing self-reflexivity

In approaching this project with cultural sensitivity, part of our analysis included being able to identify what assumptions we as a Museum and as researchers are making before conducting the research and data analysis.

Our institution's culture is passionate about educating the public in science, technology and engineering, and promotes a belief that science, technology, engineering and math (STEM) education will pave the way for a more educated citizenry to lead our nation. Our institution believes in lifelong learning, as evidenced by our exhibit spaces for toddlers and our extensive programming geared toward adults. Science is supposed to be fun and accessible to all. We recognize that many visitors come together and view their museum visit as a social learning experience. Oftentimes, the underlying philosophies of our exhibits and programs are assimilationist in approach (Lee, 1999) in that *we* are educating the public on the languages and practices of science; the exchange of information is unidirectional and originates from the Museum and educates the public. *We* want visitors to understand the practices of scientific inquiry, technology design cycles, and what science has already established as truth. In the context of politicized "hot topics" at the time this study was being conducted, the Museum had taken a stance. Based on scientific data, the Museum is a firm believer in evolution. As an institution, it has taken steps to find alternative sources of energy. Additionally, it has programming on global warming that strongly presumes that this process is reflecting beyond natural variations in temperature, and is influenced by human activity.

As researchers, we come from a social justice orientation in which we believe science, technology, engineering and mathematics (STEM) should be accessible to all. In particular, research can help inform ways underrepresented audiences gain access and succeed in these areas. However, while we and many individuals at the museum are passionate about providing access to the museum intellectually, physically and financially, we recognize there are also business aspects where the institution's bottom line can impact true access.

3.2 The process of defining the study

At the outset of this study, we knew we wanted to use a focus group approach with specific types of participants. We soon learned that an adaptive evaluation plan was necessary given the challenges of recruitment. For example, we had originally hoped that when organizers invited various community leaders to *Forums*, some community leaders would be willing to contribute their thoughts to this study and gather members

of their organizations to attend our focus groups. Unfortunately, very few of the targeted community leaders attended a featured *Nanotechnology* forum. Only one person of the entire invited group responded to an e-mail soliciting an interview on the *Forum* concept and was unwilling to organize a group.

Our next approach was contacting over ten diverse organizations that had prior relationships with the Museum through our Community Outreach office. Organizations included groups that served English Speakers of Other Languages, groups that served low income individuals, and groups perceived to be socially conservative. E-mails, a mailed letter, and phone calls were made. However, only one organization followed through with a referral that led to the successful set up of a focus group. Months later, we would return to this method to ask the Community Outreach Project Manager to personally reach out to her contacts for help. Through a couple of direct requests to these organizations, two more focus groups were set up this way.

In addition, groups who had no prior relationships to the Museum were approached after we performed Internet searches for certain categories of organizations. E-mails and phone calls were exchanged. One of the focus groups was recruited this way.

Given their close relationship to the Museum, volunteers were also viewed as a way to provide contrast to the other focus groups during this process. With the help of the Museum program staff, volunteers were invited during their weekly briefing to participate in a focus group. One focus group was recruited this way.

In addition to shifts in recruitment methods, our perspective on who focus group participants should be changed during this process. After conversations with certain program organizers failed, we realized that specific populations would be incredibly difficult to reach (e.g., the English Speakers of Other Languages, even despite planned changes to our focus group technique). We realized that program organizers, themselves, are important stakeholders who could decide to hold a forum as part of their programming and/or recommend their constituency to attend these types of events. Thus, we decided to include program staff as focus group participants, in recognition their familiarity and close relationships with their clientele.

After several months of recruiting and back-and-forth communication, five separate focus groups were held including:
- Women who belong to an organization in a low income neighborhood
- Adults who are in a technology training program that will lead to community college classes
- Career counselors and specialists who primarily served adults who are of low income and/or have disabilities
- Adults who belong to a Republican group
- Adult volunteers at the Museum of Science

III. METHODS

This research study used a focus group methodology to obtain rich, in-depth information about people's perceptions of the *Forum* program concept. Using *Forum's* cultural anthropological approach, we solicited a range of different voices and assumed that every person has a valid opinion. We used a culturally sensitive approach. Further, based on cultural competency models of evaluation (SenGupta, Hopson, & Thompson-Robinson, 2004; Symonette, 2004), it was hoped that the research process would become a collaborative effort with various group members whereby they would have ongoing involvement in the research process as reviewers and reap the benefits of feeling more comfortable and familiar with the Museum of Science and *Forum* program. Prior to the focus group, liaisons to the groups were asked to review the focus group questions and process and to outline additional considerations the researchers should be aware of.

Procedure

One individual from each organization participating in the focus groups served as the liaison with the researcher. Liaisons were asked to solicit six to eight of their organizations' members and/or administrators. The focus groups typically lasted 75 to 90 minutes. The focus groups were held at times most convenient for the participants, including during lunchtime, after work, and during the workday. Similarly, the focus groups were held at locations most convenient for members, either at the Museum of Science or off-site. Participants received refreshments and passes to the Museum's OMNI Theater in gratitude for their participation. At the focus groups, a survey was distributed to ascertain participant demographics.

During the focus groups, we asked participants about their perceptions of the Museum of Science and the types of conversations they have about science and technology. We then showed participants sample flyers for *Nanotechnology* and *Children & Computers* forums that have been held at the Museum of Science. The flyers were modified from their original form to include the agenda (see Appendix). Finally, we asked participants how to improve the likelihood of their communities' attendance to these types of programming. At the conclusion of the focus group, participants were asked if they would like to be contacted to further review findings and to be added to the Museum of Science adult programs list-serv. (See Appendix for the full focus group interview guide.)

Participants

Thirty five individuals participated in the five focus groups, which were held from January to May 2007. Nearly all participants had not heard about the *Forum* program

prior to the focus group. By nature of the study, all participants were civically engaged through their membership to the various organizations.

Group 1: Museum of Science Volunteers
This focus group was held during a lunch hour between volunteer shifts. Because of the nature of the volunteer shifts, this focus group was approximately one hour in length, or about 30 minutes shorter than the other focus groups, and the survey was not distributed. The seven Museum of Science volunteers were all interpreters whose role at the Museum is to interact directly with visitors on the exhibit floors and engage them in science demonstrations. The volunteers were at least 60 years old and some of the participants had been volunteering at the Museum of Science for over ten years. Many volunteers were retired and at least half lived outside Boston. None of the volunteers had ever attended a *Forum* before, and nearly all participants had not heard about it prior to attending. One volunteer spoke Russian and another spoke Spanish. Only two of the seven volunteers were female.

Group 2: Members of a Republican Organization
This focus group was held on a weekday evening at the Museum of Science. The Republican organization is active in campaigning for political causes such as the governor's race. It also hosts social gatherings and volunteering activities for members.

Nine individuals attended the focus group. While two participants were friends of organization members, the remaining seven participants were members of the group; among members, this included three administrators of the organization. All participants described themselves as being Republican and many rated themselves as being a 1, or "very politically conservative" out of a scale of 4. Participants ranged in age from their early 20s to early 30s. All were white and had college degrees. Participants described having a moderate or high interest in science. Most had not been to the Museum in over two years. One of the participants had previously attended a *Forum* program; another participant described attending similar science seminars and programming events around the area.

Group 3: Working Young Women's Group
Unlike the previous two focus groups, this group was held at a community center in a local neighborhood on a Thursday evening. Participants belonged to a group for women ages 18 to 30 who live in urban areas and are working class. This group aims to foster positive social change through community building, political education and creative expression. Like the Republican organization, it holds various meetings and social events and is involved in the community.

Four young women and one of the women's infants were present at the third focus group. Participants ranged in age from 18 to 25. Two of the members were African American and two were Hispanic. Three of the participants were in school and working, and one participant, who had a college degree, was working full-time. They described themselves as being "liberal," or 3 out of a scale of 4.

Group 4: Students in a Technology Training Program Leading to Certification
This focus group was held at a local community college on a weekday afternoon just after students finished a technology training class. Seven adults participated in this focus group, including five students and two of their instructors. All participants were Boston residents who are participating in a preparatory technology training program that would lead to admission to an Associates Degree program. Six of the participants were female and one was male. Most participants rated having a high interest in science and technology, but moderate familiarity with science and technology.

Most participants were in their 30s and 40s and were parents; one of the participants was a grandmother. Most participants reported having some college education and three reported being full-time students. Four participants were African American and three were White. Many participants had been to the Museum within the past two years and a few of the individuals reported taking advantage of discounts through library passes or friends' memberships.

Group 5: Career Counselors for Individuals who are Low Income and/or Have Disabilities
This focus group was held at the site of a career development organization for 75 minutes. The focus group consisted of seven females and one male. All participants are employment specialists and career counselors. Participants spoke on behalf of their clientele, who are typically adults with disabilities and/or are low income, but sometimes include clientele of higher socioeconomic and education levels. Additionally, one counselor works with students at risk of dropping out of high school.

In terms of demographics, nearly all participants were college educated. Participants ranged in age, last visit to the Museum of Science, ratings of familiarity of science and technology, and political leanings. Half of the participants had children. Three of the participants were of color, including two individuals who were Hispanic.

Limitations

This study did not aim to be representative of the various populations (i.e., generalizable to all Museum of Science volunteers, Republican group members, young working urban women, technology training students, career counselors to specific populations), but to describe the opinions of a small group of individuals with common attitudes and interests and to examine how their opinions compare to other groups with different interests and attitudes. Thus, we held only one focus group with each of the types of organizations. Focus groups are social situations by nature in which certain members can dominate group dynamics and participants can feel pressure to agree or disagree with ideas they might normally not feel strongly about.

An additional consideration needs to be kept in mind when interpreting the data. In order to provide some context at the focus group, the forum was described in its current state: as differing from traditional lecture programs in that discussion among audience

members was a valued key component of the program, and specifically hearing various perspectives on the issue. The *Forum* program format may be different at later points in time.

III. FINDINGS

Given the many visions of *Forum* presented in the findings section, readers should remember that this study was driven by the cultural anthropological approach which appreciates and welcomes the various perspectives and cultures individuals bring with them. As a result, the focus group findings provide rich insight into how different groups of individuals viewed the *Forum* program and suggest potential ways we could make the program of greater interest to them.

These results highlight the major themes that emerged from the focus groups by first addressing participants' perceptions of the Museum of Science and the types of conversations they already have about science and technology, and then discussing what qualities and advertising *Forums* would need to have in order to attract focus group participants to attend. Excerpts from the focus groups are used in each subsection as often as possible. Each quotation is followed by a letter and a number corresponding to the focus group and the participant. A guide for interpreting the letters follows: V represents volunteers, R for the Republican organization, W for the urban women's group, T for technology training students, and C for career counselor groups.

As was expected, major differences emerged between focus groups and these differences are pulled out within each section.

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1. Positive and negative views of the Museum of Science emerge: Being a "gem" but being far away and expensive

Focus group members' views of the Museum of Science shaped their responses to other questions in this study, and particularly their suggestions on how to enhance their communities' likelihood to attend.

Foremost, all focus groups voiced the importance of the Museum of Science in providing educational experiences to children and adults. One person typified the sentiment when he said, *"I think it's a great gem we have in the Museum. I think it's great to have a world renown [place]... to come with your friends, your family, your school... it's awesome" (R6).* Similarly, another person described the Museum as a place one could always learn from: *"Every time I go, I learn something different. They have light shows, the body thing, every time is something different" (T3).* Others described the OMNI Theater as being a main attraction: people *"particularly like coming here for the OMNI theaters... it's something that appeals to a lot of people" (C1).*

However, the women's, technology training, and career counselor focus groups also described perceiving the Museum of Science as being an expensive place to visit: *"I like the museums, I like visiting the Museum...it's just that it's far...and expensive"*

(W1). This was the perception among participants who both knew and didn't know they could get discounted passes from the library. Participants at the technology training and the women's group also described the Museum as having little advertisement or presence in their local neighborhoods: *"Yeah... they don't really advertise as much... You hear mostly ads about the Aquarium, but not the science museum. And science in schools is important for kids to pass the MCAS" (T6).* A career counselor who attends various community events also described the Museum's lack of presence in community fairs.

Because of limited time and their current relationship with the Museum of Science, volunteers were not asked for their communities' views on the Museum of Science.

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2. Better understanding the focus group participants: Many do have conversations on science and technology which pertain to news items or items in one's everyday lives like cell phones and computers

To better understand participants' relationship to science and technology in their everyday lives, we asked participants what types of conversations they are already having related to science and technology.

Members of the Republican organization reported already having a host of conversations on science and technology in their everyday lives. People described discussing personal technology like phones and computers, and ethical issues posed by facial recognition, RFID and credit card technologies and the privacy of the information they collect. Global warming was also a hot topic:

> *I think probably the number one thing in terms of as science goes with my friends and family would be around the idea of climatology and whether it or not there is global warming and what the causes might be [of] global warming. Whether it might be natural and/or human made and [if] we can do something about it... On Gmail... we can banter back and forth about the ideas mentioned... that's probably the number one issue (R6).*

When members of the technology training, women's group, and career counselor clients have conversations about science and technology, it typically relates to technology in their everyday lives. These types of conversations simply happened, and were not necessarily sought out: *"we probably talk about it more indirectly, not like let's have a science conversation... You're talking about something and it happens to be about science" (W2).* For example, cell phones and computers came up repeatedly across the three groups. The technology training students' conversations were further colored by their role as parents. For example, one participant reported having discussions with her son on technology as they explored possible careers for him: *"my 13-year old son wants to develop video games, so we [are] talking about what's come out now, how its developed and come forward at this point" (T6).*

The career counselors also described many of their clients as being unfamiliar with technology:

> *I think part of the problem with the technology issue with my students is that it wasn't around them when they were kids. It wasn't around them when they were young adults, and it isn't around them now. They're afraid of it, instead of something that could have been gradual progression (C4)*

Volunteer focus group members were not asked about their everyday conversations due to limited time and because Museum of Science volunteers are all required to attend weekly briefings where they learn science topics, have the chance to ask questions, and later on discuss science concepts with museum visitors.

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3. Across focus groups, participants described the forum topic as needing to be relevant; Of the example forums, Children and Computers was appealing to participants with children, but Nanotechnology was less appealing because of its perceived irrelevance

Focus group participants stressed that *Forum* topics need to have relevancy and importance in order to merit participants' attendance. In general, participants from all focus groups described how busy their lives are, thus making them very selective about how they choose to spend their free time. These three hour forums *"take a full evening out during the week"* and if the topic is *"something pretty exotic that is unfamiliar to me"* one volunteer said, *"[I'm] not sure I would take a whole evening out for it"* (V4). *"Exotic"* forums need to have connections to health or environmental effects, or else there are *"no compelling reasons"* to attend a forum (V3). As participants at the volunteer and the women's groups commented, the forum is in essence competing *"with the movies"* (V3).

For reasons of relevancy, participants at the focus group with women, technology students, and career counselors preferred the *Children and Computers* forum over the *Nanotechnology* forum. In fact, many participants across focus groups readily expressed their opinions on children's computer usage, and many cited the danger of Internet predators. For example, one member of the women's focus group related the forum to her job at an after-school program:

> *I watch my youth every day. They're addicted to MySpace and the computer... The computer used to be seen as something really educational, like a really good way to learn about stuff, but [now] it's not educational. They're using it for just recreational purposes so I wonder how much of it is like watching t.v. (W2).*

Focus group participants who did not have children in the 3 to 18 range tended to have less interest in attending than participants who did not have or work with young children. This was especially the case with the volunteers, with one participant

reporting his youngest child was in his 40s. In other cases, the volunteers' prior relationship with computers also influenced their lack of interest in attending, such as if a person felt like he was a non-computer user (*"I don't know much about computers so I wouldn't come," V2*) or a heavy computer user (*"I'm already an addict, so [I'm] not interested," V5*).

Across focus groups, the *Nanotechnology* forum was not viewed as being very relevant, but it did draw greater interest from the volunteer and Republican organization focus groups than the other three focus groups. Some participants at the volunteer and Republican focus groups were knowledgeable about nanotechnology and a couple participants had even attended nanotechnology-related events. However, there were a few complaints about the *Nanotechnology* forum as presented to focus group members. A few of these individuals voiced offense at the assumptions this forum was based on. For example, the description presumes *"there is a danger, but how do you know that there is a danger?"* one volunteer asked given that it is an emerging technology (V5). A member from the Republican group described similar sentiment about the utility of discussing a technology in its infancy:

> *Every single nano thing I've gone to has not been informative*
> *because it's all about the future which can be [bunked]. It makes*
> *the presentation too vague on the details, very little of what's*
> *going on now (R7).*

This Republican focus group member also felt that the *Nanotechnology* forum made base assumptions that the public should play a role in deciding policy, which is a position in conflict with his beliefs in a small government.

Across all of the focus groups, some or all of the participants were unaware of nanotechnology's definition. Citing the flyer, a participant from the women's group pointed out, *"This says 'No scientific knowledge needed,' but what is nanotechnology?" (W2)*. *"The flyer "presupposes that people know what nano is"* another member of the volunteers' group echoed (V3). Across forums, participants guessed that nanotechnology related to Apple nano iPods, Tamagochi electronic pets, and *"Star Trek, the nano bot that goes inside the computer. That's what my impression of nano is"* (C1). Returning to the point about relevancy, participants at most of the focus groups wanted to know why they should care about the topic. One woman at the technology training program summarized the sentiment by saying:

> *If I'm working at McDonald's flipping burgers, this really has*
> *nothing to do with me… This would not get our attention. If it is*
> *something that is detrimental to our future, that is something we*
> *should know about, with some explanation that I need to know this*
> *for myself or my family… For me myself, [in order to attend the*
> *forum as is] it would be, 'Come and learn about nanotechnology,*
> *receive a $50 something' (T4).*

Many individuals expressed needing to understand what the topic is before being able to establish its relevancy to their lives and deciding whether or not to attend.

4. Programs need to provide incentives to come; the actual incentive ranges across groups from excellent speakers to free passes to the Museum

Besides selecting topics with relevancy, focus group participants described needing some incentives in order to attend. Each focus group viewed incentives differently. For the Republican group, this translated into providing free parking and having speakers with "*sizzle*." "*Star factor*" and "*credibility*" were terms Republican participants used to summarize speaker characteristics they would be looking for (R3), such that *"you come into work the next day and you're standing around the water cooler and you say, 'Oh, so-and-so had this part of his panel and other people would actually not say, 'Huh?' They would know"* who the speaker is (R5). With name recognition also comes credibility. Without recognizing the speaker by name, there was a perception that potential learning would be diminished: *"I'm sure some of these people are brilliant but I don't know who they are. I don't know if I'm going to learn something from them" (R4).*

With the exception of one volunteer, most volunteers felt that speakers with prestigious backgrounds add to the perceived value of the program. One volunteer described wanting the *Forum* to be unique. For him, it was really important that the forum be *"something truly special"* and something he *"couldn't get somewhere else" (V1)* given there are *"other museums, concerts, libraries"* that also vie for his attention *(V3)*.

Compared to the Republican and volunteer focus groups, the issue of speaker prestige was not as important to members of the women's focus group and career counselors. Noting speakers with Massachusetts Institute of Technology (MIT) backgrounds on the flyer, even one volunteer participant perceived these credentials as being intimidating. A participant from the career counselor focus group interpreted an MIT background as meaning the speaker would be boring: *"MIT implies somebody who is extremely smart, [who will] sit there, talk in code. [It'd] probably be really boring" (C8).* What mattered to members of the women's focus group was effective communication skills, regardless of whether or not the speaker was a scientist: *"somebody who has a passion for it, who can speak plain English" (W4)* and *"somebody who can be relatable, not like a guy who went to all these schools and has all these degrees and can't connect" (W1).* To the career counselors, it was also important for the speakers' experience to be experience based and not just academically based. In the case of whether a *Children and Computers* speaker ought to be a parent or affiliated with MIT, career counselors felt practitioner experience was just as important.

On the other hand, for members of the women's focus group, the technology training students, and the career counselors, other types of incentives needed to be provided. Participants in these groups suggested that free admission to the exhibit halls or the OMNI shows be provided. "*I don't know maybe free passes to the Museum that day or something,*" participants often said (W2). Career counselors also brought up providing

free childcare and reimbursements for the T. One participant at the technology training focus group repeatedly brought up having free refreshments.

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5. Providing balanced perspectives versus information applicable to everyday lives: The focus groups conceptualized the forum's primary purpose differently across groups

Across all groups, the acquisition of knowledge was viewed as the primary attractor of the *Forum* experience. Qualitative differences emerged in whether the emphasis should be on the airing of multiple perspectives versus providing actionable information.

Republican focus group participants stressed the importance of having a balanced presentation of perspectives and a multidisciplinary approach in which each speaker represents a different field. As is, having all professors is *"one-sided or lopsided" (R1).* Thus, the *Children and Computers* forum might feature a childhood psychologist, a person from MySpace, and a teenager on the panel. The *Nanotechnology* forum might feature speakers from the business, academia and policy fields. One participant reacted positively to her peer's suggestion at the Republican focus group:

> *Now that would be something to write home about because you have someone from each different area who can come in and say, 'This is what's been done from a public policy standpoint'... The CEO says, 'These are the decisions we're making, these are affecting the decisions we're making.' The professor says, 'This is where it's going to theoretically be 10 years from now.' (R3).*

Further stressing the importance of providing balanced perspectives, a participant from the Republican group also saw *Forum* as a way to counter the news, and to provide more accurate exposure and airing of other viewpoints:

> *I'm sure all of us think the news is very liberal. Obviously you have that [one] perspective but have the other side too... [For example,] all these things are true about global warming but then there are all these other things too that make people wonder if it's true (R5).*

For Museum of Science volunteers, presenting multiple perspectives would come with the choice of a controversial forum topic, such as the discussion that comes with the *Darwin* exhibition between creationism and evolution. That type of experience would be *"lively and educational. Controversy brings excitement" (V5).*

In contrast, participants at the women's organization, technology training program, and career counselor focus groups emphasized the importance of having an informational focus to the event. As many of the participants described, they wanted to gain practical knowledge such that they would make more informed decisions in their day to day lives. One career counselor described the appropriate level of information as follows:

> *... again, our groups here will be intro level beginning. That's kind of the people we work with they need that beginning first*

step… They need to work their way up to something else. The people we work with need to have things straight & simple at the beginning and not something so beyond them they won't understand (C7).

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6. Suggested forum topics are related to each group's requests for relevancy and preference for either hearing multiple perspectives or gaining practical information

As one volunteer adroitly expressed, *"what types of topics you talk about drives who comes" (V7)*. When asked what types of topics they would be interested in, participants' responses reflected the values they place on an ideal forum program. For the Republican and volunteer groups, issues in the news came up whereas for the women's group, technology students, and career counselor groups, science and technology issues that are headlined in the news related to everyday lifestyle arose. However, the one topic most focus groups brought up was energy and the impact of global warming (or climatology, as one Republican participant described it).

The volunteer and Republican focus groups typically suggested featuring controversial topics that have received fairly extensive coverage in the media. For the Republican group, these included technological advances and consequences on privacy, embryonic stem cells, and issues discussed on Capitol or Beacon Hill: *"Anything discussed on Fox news… [like the] O'Reilly [show], and put it in that context, you'll get [members of our organization] there" (R1)*. Similarly, volunteer focus group participants described interest in stem cell research and aqua farming. Individual participants from the volunteer focus group described interest in the toxic effects of plastics on hormones and the intersection of religion and science. Both focus groups emphasized having high interest in global warming and energy:

> *Nuclear power. Pluses and minuses (V5).*

> *Corn growers and corn supply [as an alternative fuel]… Didn't think about that much until I started to hear about the other sides of the issue (V4).*

In contrast, the women, technology students, and career counselor focus groups suggested *Forum* topics that were all practical and application-based. Typically, topics related to health, family, and personal technologies:

> *What we could do in our daily lives in terms of you know, like cleaning products, and how we can save in our homes in terms of electricity, use of water, and the small things we can do as our part on the environment as the topic. Let's turn everything to green (T1).*

> *Family – that's anything and everything… (T4).*

> *How people take care of themselves when they get diseases. They get diagnosed, but they don't really know what disease they have…*

*what they have, history of it, how to take care of it. My mother is
diabetic, and we struggled for two years because she didn't want
to take her medication... things like that, life change. Forums like
that contribute to everyday life (T6).*

*Finding out how to own a computer, and what antiviral products
you can have, educating people on them, and how to not get ripped
off (C6).*

Other example everyday technologies included microwaves, cell phones and digital
music players: *"Like I do not know how to use an mp3 player, I don't even understand
it... I heard they're making, there's a new mp3" (W4).* Another participant described
interest in *"anything relevant like cell phones, like how cell phones transmit waves and
how that affects you, I'd be interested in that" (W2).* Other example health issues
included asthma, pollution, and hormones. The career counselors also suggested a
forum on disabilities and assistive technologies: *"Assistive devices. Certain people use
animals to cope, and what would be really interesting with the American Disabilities
Act and informing people about—I think there are a lot of myths, and I think informing
them about that would be really cool" (C4).*

Additionally, participants at the technology and career counselor groups also suggested
focusing on local issues:

*...again you have to target them and find things that interest them
to talk about. A lot of my students come from Dorchester-Roxbury
area. [Identify] issues that were going on in those areas. It's a
matter of finding topics they relate to (C7).*

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7. The discussion section is viewed as a less important component of the program, and needs to be set up as a comfortable experience

Across focus groups, the discussion was not viewed as the main attractor of the *Forum*
program. Many of the participants from the Republican and women's group raised the
point that they can have discussions anywhere: *"I can talk to my friends and family
about things at home" (W1).* This fits in with other survey findings that demonstrate
that the discussion is not viewed as a motivator to attend the *Forum* program.
However, after participating in the program, participants are typically satisfied with this
component and more so than they anticipated (Reich, Chin & Kunz, 2006).

As described earlier, for the women's focus group, the focus of the *Forum's* purpose
was on information dissemination. Thus, members of the women's group envisioned
the discussion section as a way to "*digest*" information (W2). The discussion should
come naturally: *"After you hear everything, you talk about what you think about it"
(W1).* The women's group imagined the discussion to be small and among individuals.

At the Republican organization focus group, a couple of participants emphasized that main ideas or the "*most contentious points*" should be addressed at large to ensure a high quality experience since much of the discussion is limited to just one table's interests and knowledge (R7). A concern was that certain key points might be missing from the small group experience due to limited public knowledge on science topics:

> *An interesting forum you might have [would be] on climate warming. For instance, there are points to be made that I don't think are typically in the public view or not given a lot of air time to bring that to a greater awareness. Otherwise, your only audience is the people at your table... [and you would] not feel like you accomplish a lot (R2).*

Two Republican focus group participants and one volunteer described wanting scientists at their discussion. The scientists could provide *"some other cohesive way to bring [out] points,"* raise new perspectives, and keep the conversation productive: *"I would love to speak to [a] professor one-on-one because I know nothing about his field. He could tell me and I could bring my perspective of my life and how my life is different than his, certainly" (R5).* However, one of the technology training program instructors voiced her apprehension of interacting with scientists: *"If I was there with a bunch of scientists, I would feel uncomfortable because I would feel like I'm very uneducated compared to them" (T2).*

Across focus groups, it was important that the conversation be set up to be an experience as comfortable as possible. As one participant at the technology training program said, *"For me, at first, I would be nervous. I don't know you. I would open up as I get to know that person. You give input, get to know them better... that's how I would feel" (T3).* One participant at the career counselor group suggested holding series of forums on a regular basis such that *Forum* attendees would become more comfortable sharing their opinions over time. Participants to the Republican and volunteer groups suggested having facilitation during the discussion. However, the one participant from the Republican organization group who had attended Museum of Science *Forums* in the past added a disclaimer that facilitation was not always effective. Participants at the Republican and women's group suggested icebreakers as another technique to increase comfort during the discussion. A silly icebreaker that the women's group uses is to have people start a sentence with, "When I wake up in the morning, I scratch my…" and to then finish their sentence with a fruit or vegetable. This icebreaker, which is designed to be playful, ends with people laughing at themselves.

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8. Where the forum is held and the time of the event matters to these potential participants

Focus group participants described that the ideal location for a forum would be easily accessible, have parking, and/or be close to a public transportation station. However, there were differences in preferred day and time across the focus groups.

For the Republican organization, career counselors, technology training students, and women's focus groups where most members were either working or in school, Thursday evenings and weekend afternoons were viewed as good times to hold the forum. One member of the Republican group said that if the forum was held on a Saturday afternoon, it would allow her to stop by the Museum before spending an evening in Boston. The women's focus group members and career counselors strongly recommended weekend dates, such as on Saturday or Sunday afternoons from 1pm to 3pm. However, participants at the women's group provided a disclaimer that public transportation impacts their attendance. As is, if one participant went to the *Nanotechnology* forum after her classes on the scheduled Tuesday evening from 6pm to 9pm, she wouldn't get home until very late: *"I looked at the date and the time first and 6 to 9, from [leaving] from the Museum, I'd get home at like 11pm. And Tuesday I have a full day of classes. And it's like right after people get off from work, for people who have kids" (W4).* The women's focus group reminded us that public transportation buses run less frequently on Saturdays than weekdays and least frequently on Sundays.

For the volunteers, many of whom were retired, daytime events were preferred. Given that most of the participants did not live in Boston, the volunteer participants expressed concern over the commute to the Museum for evening events. Storrow Drive was viewed as a "parking lot" around 6pm, making the Museum difficult to get to and participants thought 6pm to 9pm was simply too late. One participant reported how his church has discovered evening events during the wintertime are unpopular with older individuals because they have greater difficulty driving when it is dark outside.

In summary, hosting a number of events at different times is key:
> *So it's finding that sweet time, I don't know exactly what that it is, but maybe if it's combined with something or another event... You might want to do alternative times where you have an evening one, have a Saturday afternoon one where the children can be in the Museum, and the adults participating in this so it's a shared activity. But, time is a precious commodity (C5).*

For members of the women's, career counselors, and technology training program focus groups, the idea of holding forums in their local neighborhoods was a recurring suggestion. Participants suggested holding the forum in a local library or community center, or someplace right by the T so the event would be easier to access. To this group, although the Copley Square branch of the Boston Public Library was far away, it was still not as far away as the Museum of Science. One member of the women's group suggested how the forum could even be held in the park during the summertime.

The career counselor and women's group brought up the suggestion of being able to bring their children to the forum with a guarantee of free babysitting.

9. Advertising needs to be done extensively and have well designed flyers

With people leading busy lives already, many participants across focus groups felt as though they are inundated with advertisements. Thus, the *Forum* would have to make the program seem highly appealing and accessible to a very selective group of individuals. Across focus groups, there was no one best way to reach all individuals.

Participants at the technology training and Republican organization focus groups advocated for word of mouth techniques. This could be done by approaching receptive community leaders, such as the case with the Republican organization, or individuals from local neighborhoods who could tell neighbors about the program: *"I'm comfortable in [my] own neighborhood; I will pass out flyers. I know people. They'll listen"* (T4). Church leaders were also suggested as a vehicle for delivering messages to different communities, since if *"something [is] strongly suggested by minister,"* it will definitely get the *"message across"* to large numbers of people (T1).

Republican focus group participants said it would also help if the event was flagged as a good opportunity or reviewed positively by an authority, such as the media or the online public. To attract twenty-somethings, Facebook© and other websites like Meetup.com could be tapped as an advertising mechanism. A few focus group participants mentioned how a *"cash bar will bring people"* since people would not have to choose between going to a bar after work and going to a forum (R6).

In contrast, participants at the women's group reported that e-mail and the Internet were not the best mechanism to learn about *Forum*. Instead, as heavy public transportation users, advertisements on the train are effective because they have nothing else to look at. Another method would be having someone pass out flyers at the local T station or advertising in the Metro, a local free tabloid that public transportation riders frequently read.

Career counselors defined effective marketing channels as places that have high foot traffic and places that they typically recruited clients from. They suggested the following various locations: local organizations, the Metro, schools, laundromats, churches, supermarkets, career centers, public housing developments, the Department of Welfare, Social Security Office, and public transportation.

In addition to word of mouth, focus group members from the technology training group also suggested traditional media outlets like the local town newspapers, radio advertisements, and billboards. Technology training students suggested other advertising mechanisms, such as having newspaper boxes set up along the street to announce forums and providing flyers to public school students such that every parent in Boston would be aware of the forums.

Participants at the volunteers group described their weekly volunteer briefings as prime marketing tools. These informational sessions were viewed as *"payment"* for their time volunteering and a place to learn about science and Museum events (V3).

9.1 Appearance of advertisements is crucial

Participants described wanting flyers that were eye-catching. While the flyer presented to focus groups was a mock-up, one member of the Republican organization focus group described how she gets *"seven to 20 [ads] on a daily basis"* and nothing on the sample flyer caught her eye (R3). Similarly, participants at the career counselor group mused whether the flyers were made by someone in the Information Technology department and encouraged professional graphic consulting. Members at the women's, technology, and career counselors were entertained at other group members' interpretations of the photograph. They suggested photographs on flyers would need to be more appealing and have a caption.

The volunteer, Republican, and women's focus groups described wanting more information on the flyer about the various perspectives. It was important to the Republican group that the advertisement show why speakers were selected. Links to the speakers' work should be provided on the *Forum* website and electronic advertisements. For volunteers, understanding what they would gain from the forum was important. What *"would we be talking about?" (V3)* participants asked several times. *"What would the speakers be talking about" (V7). "What would I be learning?" (S4)* and *"What am I going to get out of it?" (V6).*

In contrast, the career counselors group found there to be too much information on the flyers, such that it would be intimidating to their clientele. The two flyers they saw had too much information on it for their clientele and were too structured. They needed to be *"short and sweet" (C7)*:

> *The flyer is too structured, there's too much information. It really looks like it's geared toward a certain population. It doesn't mean that low income people aren't educated, because a lot of them are… For me, it's too much information (C2).*

Participants from the volunteer, women's, technology students', and career counselors' focus groups requested definitions of complex topics like nanotechnology. Additionally, two participants at the career counselor group recommended using more popular terminology in substitution for the word 'nanotechnology':

> *If you said something like that there, 'Khaki pants [that repel water],' have a thread there. But if you [say] - whatever the word is [nanotechnology]– you need a TV show where they would find out more, or things they already know but they didn't know this is the name for (C4).*

As described earlier about the role perceived relevance plays in participants' decisions to attend a forum, flyers need to establish relevance with the general public. Participants at the women's group described the advertisement as grabbing them, telling why they should care, and describing how the ideal topic relates to their lives. "*Have a reason as to why we should care,*" one participant from the women's group said (W2). Members of the women's group and career counselor group stressed that the advertisement also be careful in language usage. In the discussion question for the example *Nanotechnology* forum, for example, acronyms like R&D and EPA and words like moratorium were used. Participants did not or would not know the meaning of such terms. One career counselor even thought on the flyer, the phrase "*No prior scientific knowledge,*" sounded very imposing. Participants from the career counselor group emphasized how language usage influences who the audience can be. One participant described how some of her students read at a fourth or fifth grade reading level and include people who are non-native English speakers.

> *This goes back to the language on this flyer. I think that it looks*
> *like it's really designed to attract a particular population, and*
> *that's parents and children who have access to computers. What*
> *about the parents who don't have access to computers, and who*
> *have children have access at school and would like to know more*
> *about it and want to get more updated on it? (C8)*

One participant at the Republican political group also appreciated the active and inviting language of "join us for an evening" on the sample *Nanotechnology* flyer that implies that attendees will learn as opposed to the use of passive language.

Career counselors added that directions should be added to the flyers, such that the Museum is accessible by T and/or provide accommodations for individuals with disabilities. Furthermore, flyers should also "*let [you] know it is casual event. Don't feel like you're going to be intimidated*" or give the impression that people will be "*wearing suits*" (F8).

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10. Can diverse audiences be brought into the same discussion? Focus groups discuss who they envision other audience participants to be

Most focus group members felt audience members at the *Nanotechnology* and *Children & Computer* forums would be closely related to the topic. For perceived *Nanotechnology* audience members, this meant scientists, academics, science students, and other people who already know what nanotechnology is. For *Children and Computers,* the audience would be teachers and parents. For the women's focus group, the *Forum* audience also meant "Cambridge people" or those who live in close vicinity of the Museum.

At the Republican focus group, there was some disagreement over the general audience at these types of events. One participant expressed strong doubt that these events could bring a truly diverse audience:

> *Even if the main Average Joe's like someone who isn't an*
> *academic or business person... someone off the streets or*
> *something, I really don't think you're really going to get that*
> *ever... Those people don't even know the Museum of Science*
> *exists; that's not part of their sphere (R2).*

However, one person who had attended some prior *Forums* disagreed, stating that there were many Average Joes present, leading to an uncomfortable dichotomy among the two extremes: those who were very knowledgeable and those who were very unknowledgeable. She said, "*It was like being in a third world country. There was no middle class and the rich couldn't talk to the poor because the rich were afraid to open their mouths..." (R9).* This statement suggests that certain focus group members currently hold expectations about other audience members, and in this case, that the audience will be like them.

The volunteer focus group touched briefly upon the idea of participants' pre-knowledge before coming into the discussion. For example, the facilitator could provide information for everyone at the discussion or a book club model could be adopted in which everyone reads about the content before attending. As a result, participants would be on even playing ground to discuss the content.

IV. DISCUSSION

Focus group findings reveal insights into potential participants' perceptions of the *Forum* program as it is currently marketed and designed by MoS, and factors that motivate potential participants to attend. Foremost, statements made by each of the focus groups suggest that these potential participants did not see the small-group discussion components as a major draw of attending *Forum* events. Instead, each group offered suggestions for motivators that would encourage both themselves and other members of their community to attend the *Forum* events. Categories for these motivational factors appeared across focus groups and include the following:

- Appealing advertisements that would balance information and catch people's eyes
- Topics that are viewed as relevant, interesting, and important in today's times
- Easy access to attend the event through parking, date/time and/or public transportation, and
- Incentives to attend, such as the surefire acquisition of knowledge, well-known speakers and/or tickets to attend the museum at another time.

Although there were common categories that could be used to frame the types of motivators offered by the participants, there were qualitative differences in how the groups described these factors. The major differences, as described by focus group, were the following:

Topics viewed as relevant
- *The Republican and volunteer focus group* members emphasized having more controversy-oriented forums featuring national "hot topics" that are widely covered by the media. In contrast, *the career counselors, technology students, and women's group* called for experiences that were more practical and provided information related to daily activities.

Easy access
- *The career counselors, technology students, and women's group* felt an essential element of *Forum* would be having events at local neighborhood-based locations as opposed to at the Museum of Science. They advocated for weekend dates. The *volunteer and Republican focus groups* felt *Forums* at the Museum would be fine. Volunteers preferred daytime events (so as to avoid traffic) and the Republicans preferring weekday evening events.

Incentives
- *The career counselors, technology students, and women's group* suggested providing monetary incentives and services, such as free admission to the museum and babysitting to attendees, while *the Republican group and some of the volunteer focus group members* thought celebrity and multidisciplinary speakers, such as CEOs and journalists, would be a major incentive as would having the time and opportunity to interact directly with speakers.

Based on the differences in the characteristics of the *Forum* events that would motivate these communities to attend, it might be difficult to create and deliver one *Forum* program that would bring these audiences together. What emerges from the data is the

possible need for two different types of *Forum* events. The first type of forum is *informational and practical* in that it imparts knowledge of an everyday technology issue and helps participants to make decisions about their daily lives. Information provided by designated stakeholders should be concrete and actionable. Discussions should focus on helping participants to think through their own technology-related decisions, as well as helping the participants to gain insights on topics that are important to their local community. These forums would ideally be held in the local communities on a weekend. The second type of forum, the *controversial forum,* is one where people come to hear a lively discussion among designated field experts who represent different viewpoints on a science or technology issue that is of national importance. The speakers would come from different disciplines and some might be well known. At this type of forum, participants have the opportunity to engage in discussions with the experts and to present their own perspectives with other participants. This forum would be held at the Museum of Science on a weekday evening and/or afternoon.

Although the two suggested types of forums are quite different in nature, participants might still be interested in attending both types of events. Rather, these forums could be viewed as complementary, and integrated into a two-tiered series where there is a continuation in knowledge level. For example, the first forum could provide a primer on a topic. If the *Children and Computers* forum followed this model, the first forum might discuss what role computers are playing in children's lives nowadays at school and how to evaluate purchasing a home computer and children's computer software. The second forum in the series would present various perspectives on computer usage questioning its importance and weighing benefits versus detriments in general computer and Internet usage. Thus, participants who attended the first informational, daily decision-making forum might be more interested in and comfortable with attending the second, more controversial forum. These two types of forums would have also satisfied common requests participants made at the actual *Children and Computers* forum for more practice-based information.

Returning to its cultural anthropological approach and democratizing mission, *Forum* depends on the sharing of multiple viewpoints and experiences. Should typically disempowered groups such as individuals from low income groups be deemed an important voice, the focus groups findings present the need for a shift in approach for *Forums*. As a program that is currently free of charge to the public and that provides free parking and refreshments, *Forum* has thus far viewed itself as a financially accessible experience. Findings from surveying of the *Forum* program demonstrate that despite this financial accessibility, the program has not been able to attract a demographically diverse audience because of a lack of accessibility in other ways. The focus groups provided insights on additional types of barriers that currently prevent certain communities from attending, such as location, transportation, childcare, and perceptions of the Museum of Science. Programmatic and marketing changes such as those presented earlier might help to eliminate such barriers.

V. CONCLUSION

The results highlight how *Forum's* current design (and in particular, its marketing) may appeal to a very specific audience, whether or not the program organizers are conscious of this impact. It should not be surprising then, that in its current design, *Forum* has not been attracting many individuals from the volunteer, low income individuals, technology students, and women's focus groups. With different program designs appealing to different audiences, interesting questions arise for program organizers and the Museum of Science about who *Forums* is really designed for right now, with the findings suggesting it is for individuals with who live by the Museum, are able and willing to come to the Museum on an evening or weekend, have childcare options, own computers, possess knowledge about new and emerging sciences and technologies (such as nanotechnology), and have a direct relationship to the topic.

Other interesting questions were raised by the Republican focus group about the knowledge gap among *Forum* participants. How can the difference be navigated such that the experience is satisfying for everyone, and that participants have clear expectations of the experience and appreciate the different ways of knowing this program promotes?

In many ways, the findings are a social commentary on how science and policy more broadly speaking face great challenges in serving underrepresented minorities. The findings present exciting and challenging opportunities for *Forum* to break new ground.

In reflection, it is natural that programs are designed based on what program organizers are comfortable and familiar with. To encourage organizers to design more inclusive, appealing programs beyond their current abilities, several strategies are provided on how to make *Forum's* practices more inclusive:

- <u>Have a team of consultants or an advisory board</u> of community organization leaders to help provide feedback on program design, topic choice, and even advertising. Through feedback, organizers could gain many suggestions that we received during the focus groups, such as having multiple forms of advertisement for different audiences. Based on the women's focus group's suggestion, non-email methods might be more emphasized with some lower income populations. For other groups, it might be important to use e-mail and stress speakers' academic credentials or practitioner experience.
- <u>The Museum must work outside its physical building and in the community to build a more diverse audience</u>. The Museum was viewed by some community groups as being a far away and expensive place. This suggests that a forum held within the community at a trusted site could be a possible strategy for achieving greater inclusion. Holding forums in the community would also be easier when done with a partner organization that already has an established presence and a level of trust in the community. Suggested partner organizations include libraries, churches, and local community organizations.

- When planning the *Forums,* the program organizer should try to consider some of the issues raised by the focus group participants. One way to bring the perspective of these participants into the planning process (including writing the descriptions used to market the program) would be to think about the answers to the following questions: Would this forum relate to people's everyday lives or address a hot topic that has national attention? Would people understand what the topic is and the words used to describe it? Does this advertisement make people care about the issue and be interested in it? What will the experience be like? What will they get out of the experience? Organizers should also remember that the website can have additional information beyond what the flyer or condensed version provides. Beyond the advertisement, adjustments to the actual *Forum* content, format and materials also need to be reconsidered carefully in correspondence with target audiences.
- The *Forum* program should be willing to take calculated risks in the types of topics it features. Part of the findings suggest that *Forum* may need to take greater risks in developing forums that meet the interests of these five potential audiences. This process includes continued experimentation. In the past, the *Forum* program has not focused on current science topics in the media that could draw heated debates among participants. However, the volunteer and Republican groups pointed out that with changes to the topic focus, *Forums* could be an exciting experience and elevate general interest in and public awareness of the *Forum* program.

Not all of these suggestions come without a price tag. In order to reach lower income individuals, *Forum* needs to provide more resources to make this experience more accessible. In order to reach members of the Republican focus group, *Forum* needs to have a greater focus on policy and feature eminent speakers, who might carry higher honoraria charges than lesser-known speakers. Additionally, should *Forum* want to recruit members of these five focus groups, such recommended changes would also require commitment on behalf of the institution in order to make the community voices truly heard at these types of events.

In closing, it is important to note that the findings serve as a reminder that our evaluation results are directly influenced by whom we ask. Had we relied on feedback solely from prior *Forum* participants, we would not have gained the multiplicity of visions and preferences of *Forum* that enrich our understanding of how it is being perceived by groups of organizations with similar attitudes and interests. It is quite possible that through holding additional focus groups with additional types of organizations, new insights would be gained.

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MOS FORUM DIVERSITY FOCUS GROUPS INTERVIEW GUIDE

INTRODUCTION
- Thank for coming
- Introduce selves & what research department does
- Purpose / Why we're here (Forum)
- Process of focus group (&2 Omni tickets)
- No right or wrong answers – our role as representatives of focus group members
- Collaborative nature of study – sending summary of findings for accuracy check
- Consent form (participant rights)
- If words you don't understand / speaking too fast
- Questions?

WARM UP / GENERAL QUESTIONS [HANDOUT + Small groups]
- Introductions: What do you usually do for fun when you're not working? What do you do?
- How do you view museums as a place for you to visit in your free time?
  - last visit to MOS, frequency of visit, reasons for visit, importance of visits or other cultural institutions
- How do you think the MOS is viewed by members of xxxx (your community)? (What is your impression of the museum as a friendly/welcoming place for members of your community to visit?)
  - How much do you think it is viewed in terms of being a trustworthy, safe place to receive scientific information? To discuss science & technology issues?
- In your everyday life (in your conversations with friends, family, coworkers, club members) do you have conversations that involve science or technology? What kinds of conversations do you have that involve science or technology? [Give examples]
  - What makes you talk about these issues? Anything stick out? What kinds of topics? Nature of discussion?

FORUM IMPRESSIONS: [HANDOUT + READ TOGETHER]
- Forum description
  - First reaction to the Forum idea
  - Questions about Forum
  - Interest level in attending a Forum: high/medium/low
- Children & Computers description (ADD HANDOUT)
  - Reaction
  - Questions
  - Expectations of program, audience (What would you gain from attending?)

- o Would you go? (Probably would go; not sure; wouldn't go). Why or why not? What would increase to go? (what informs decision making)
- ▪ Nanotechnology description (ADD HANDOUT, DEFINITION!)
  - o Reaction
  - o Questions
  - o Expectations of program, audience (What would you gain from attending?)
  - o Would you go? (Probably would go; not sure; wouldn't go). Why or why not? What would increase to go? (what informs decision making)
- ▪ [Children & Computers – if time]
- ▪ Based on what you've heard, what, if anything, sounds valuable about the Forum experience? If you went, what you do you think you would gain?
  - o Questions
  - o Comfortable with discussion groups?
    - ▪ A big part of Forum is the idea of speaking about your opinions and hearing the opinions of other audience members (people you don't know) – does that idea appeal to you?
- ▪ What prevent from going? Any way to get around it?

I want to ask you about how we can make this Forum so that you would be more likely to go. I want you to think about people who belong to your community – your friends, peers, coworkers in answering these questions.
- ▪ Topics
- ▪ Formats
- ▪ How to make it a comfortable experience
- ▪ Marketing / Interest in coming
- ▪ Best times & locations
  These forums are usually around 3 hours. How long would you want to stay at an event? (How likely would you be to go to? These topics usually run about three hours and largely have been held at the Museum of Science, although we've had them at Bunker Hill, a Dorchester high school, and Boston Public Library. Sometimes they are weekends, sometimes they are Monday or Tuesday evenings. Logistically speaking, how convenient does that sound to you?)

- ▪ I'm interested in whom you view as other audience members of the Forums.
  - o Do you see other Forum attendees to be people you know?
  - o How similar or dissimilar do you view Forum attendees should be in terms of their backgrounds / opinions as you? What is important to you?
(Based on what you heard, what parts would you keep? What would you definitely change?)

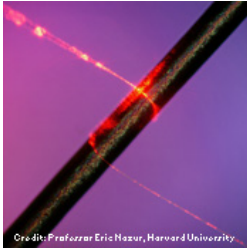**CONCLUSION**
- • Do you have any questions for me?
- • Thanks

Nanotechnology: Risks, Benefits & Navigating the Unknowns

Tuesday, September 25

Museum of Science, Boston
6:00 p.m. - 9:00p.m.

**FREE - includes parking and
light dinner**

What is nanotechnology and why is it important? What role should the public play in making policy decisions about this emerging technology? Join us for an evening of discussion and dialogue at the Nanotechnology Forum. Find out about the potential future of nanotechnology, ask questions of experts, and let your voice be heard on how you think nanotechnology research should proceed. No prior scientific knowledge needed!

Agenda

6:00pm   Introduction

6:10   Speaker presentations:

Professor Jackie Isaacs (Northeastern U.)
Attorney Melissa Hoffer (Wilmerhale)

6:50pm   Small group discussion:

Given the potential benefits and unknown effects, do we: 1) Move ahead with R&D under EPA; 2) Have a moratorium on R&D; or 3) Is there a middle ground?

7:25pm   Break

7:40pm   At large: Questions

8:20pm   Small group discussion

8:35pm   Report-out and wrap-up

Museum of Science

Children & Computers: What is the Recommended Daily Allowance?

January 28th, 2007

Museum of Science, Boston
2:00 p.m. - 5:00p.m.
FREE - includes parking and

light refreshments

Whether they're playing games, using the Web for research, or instant messaging friends, children of all ages are increasingly using computers. But how much of a role—and what type of role — should computers and online interactions play in their daily lives? Come to the "Children and Computer" Forum at the Museum of Science to hear from a panel of experts and to share your perspective, values, and opinions in small group discussions.

Agenda

2:00pm Introduction

2:15pm Panelist presentations:

> Professor Eric Klopfer (MIT Teacher Education Program)
> Professor Henry Jenkins (MIT Comparative Media Studies)
> Ingeborg Endter (Consultant in Media and Education)

3:00pm Q & A

3:30pm Break

3:45pm Small group discussion: What do you think children should get out of their interactions with computers?

4:30pm Report-out and wrap-up