Curiosity

Play

Informal Inquiry

Humor
Chapter 8

Social Inquiry Exhibits

Fostering Social Learning in Museums

Thomas Rockwell, Heike Winterheld, Joshua Gutwill, and Shawn Lani

The focus of this chapter is on an emerging genre of exhibits we call social inquiry exhibits (SIEs). The term social inquiry exhibit is proposed for a broad category of experiences in which the visitors’ social interactions are both the content and the medium of the exhibit. As such, they are well suited to fostering inquiry experiences of many social phenomena, including empathy. We start by defining SIEs and provide a broad variety of examples. Then, we reflect on what psychological research tells us about empathy and how it relates to SIEs. Finally, we offer some thoughts about the benefits and barriers to introduce SIEs in museums.

To get a sense of an SIE, picture two museum visitors playing at an exhibit called Sip or Squirt from the Science of Sharing exhibition (2014). They face each other across two drinking fountains (Figure 8.1), with each visitor controlling not their own fountain but their partner’s. They have two options: They can give their partner a regular “sip” from the bubbler or a brief “squirt” in the face from a hidden nozzle. Their choices are linked. If both people choose a sip for each other, then all goes as expected and both partners have a normal sip. If one partner chooses “sip” and the other “squirt,” things go as expected for one of them, but the other who gets a squirt might feel not only surprised but betrayed. Finally, if both partners go wild and choose to squirt each other, neither gets anything at all (along with a sad soundtrack that signals that they both lost out).

The game is lighthearted, yet oddly suspenseful (“Am I going to get a sip, a squirt, or nothing at all?”), as it invites people to explore nice and not-so-nice sides of themselves. They also can repeatedly experiment with different choices and see what effect they have on one another. In the process, they are drawn into guessing what the other will do (which involves perspective taking, one aspect of empathy) and modifying their choices accordingly. This
particular SIE illustrates a game (or situation) called the prisoner’s dilemma, which is widely used in the social sciences to study social phenomena, such as negotiation, collaboration, and conflict, where each partner’s outcomes depend on choices that the other makes.

This chapter explores SIEs generally, proposing insights and tools for museum professionals interested in using this emerging type of exhibit for many potential social topics, including—but not limited to—empathy. The understanding and design practice of social inquiry exhibits is still in its early stages. We offer tools and approaches here in the hope that they will advance the development of this type of exhibit in general, with a particular focus on supporting exhibits that help visitors engage in, and reflect on, meaningful empathic experiences.

The insights in this chapter derive from several Exploratorium projects. Science of Sharing (SOS) was a 2,500-square-foot exhibition developed under the leadership of Hugh McDonald and Josh Gutwill, in collaboration with the North Carolina Museum of Life and Science. Funded by the National Science Foundation, SOS opened in 2014 (Figure 8.2) and pioneered the use of
SIEs for the Exploratorium. In 2017, as part of the Human Generosity Project funded by the Templeton Foundation, the Exploratorium worked in partnership with evolutionary psychologist Athena Aktipis and anthropologist Lee Cronk to produce the Survival Game, an exhibit that gathers data about visitors’ cooperation for university researchers. Also in 2017, American Experiments, a collaboration with the Smithsonian’s National Museum of American History, produced five interactive stations (all SIEs) in conjunction with their two new exhibitions on democracy and immigration (American Democracy: A Great Leap of Faith, and Many Voices, One Nation).

Two new projects are currently underway and scheduled to open in 2019. Identity is an exhibition at the Exploratorium that deals broadly with how different identities, such as gender, racial, sexual, and national identities, are constructed and maintained. Street Smarts, funded by the National Science Foundation, is a project designed for an urban streetscape, located close to city hall in San Francisco in an area that serves as a crossroads for many different sociocultural identities. One of the stated goals of the project is to understand which types of visitor experiences are more likely to engender empathic feelings across different identities.

The Exploratorium’s approach to exhibiting social phenomena is to promote understanding of all dimensions of human experience, positive and negative, and we therefore try to minimize moralistic oversimplification.

Our assumption has been that apparently positive, prosocial tendencies, such as empathy, generosity and compassion, coexist in most people alongside darker, more antisocial ones, such as self-centeredness, hostility, and competitiveness, and that both tendencies have evolved to be adaptive in certain situations. As will be discussed below, even a seemingly positive phenomenon, such as empathy, can have negative social dimensions. Consequently, SIE projects at the Exploratorium attempt to shed light on, and provoke inquiry into, the entire range of human social behavior. In the end, we do so from an optimistic stance, with the hope and intention that promoting awareness and inquiry into all social phenomena, including their negative dimensions, will contribute to the greater good.

DEFINING SOCIAL INQUIRY EXHIBITS

What is a social inquiry exhibit and what differentiates it from other kinds of exhibits? We define SIEs as exhibits with the following features:

• Social phenomena form the content (e.g., the exhibit experience highlights how people trust or distrust each other in certain situations; labels communicate ideas about trust).
• Two or more people mutually influence one another, ideally in real time, in ways that permit inquiry into that interaction (e.g., people cooperate to perform a task that has multiple variables, allows for different responses, and generates varied interpretations).
• The interactions often foster metacognition—thinking about thinking or feeling—among the people involved (e.g., people realize that they are more competitive in certain situations than they previously believed).
• Learners are often able to make generalizations to a social science phenomenon beyond their immediate experience (e.g., after using Sip or Squirt, people might remark that countries often have a hard time trusting each other in a similar way or even discuss the prisoner’s dilemma in a general way).

The use of the word inquiry in this definition is informed by an extensive literature on inquiry in science, science education, and hands-on science exhibits. Although this literature is more focused on the physical sciences, we propose that this concept of inquiry can be adapted to social science learning.

Rather than require SIEs to embody all four features above, we view the SIE category as a “bulls-eye target,” with central exhibits having more defining characteristics and peripheral exhibits containing fewer of them. The first
two features may be baked into the design, while the latter two are learning outcomes that must be measured. For example, Sip or Squirt is a central SIE. The design focuses on the social science content of cooperation and trust (in a prisoner’s dilemma format) by offering face-to-face water fountains that only activate once both users have made their choice. The explanatory labels also support this interpretation of the content. By requiring both users to make a choice before the fountain dispenses water, the exhibit ensures that two people mutually influence one another and provides them an opportunity to experiment with their interaction. As for the latter two features, a summative evaluation of the Science of Sharing exhibition found that study participants engaged in metacognition and generalization at this exhibit.³

Team Snake, also from the Science of Sharing exhibition, is another example of an SIE at the center of the category. In this game reminiscent of Pac Man, four players each separately control one of four directions (up, down, left, right) for the snake (Figure 8.3). The players have to work together to achieve the goals of earning points and avoiding the walls of the arena. In the process, they experiment with different forms of communication and coordination. An engaging group game, the exhibit calls attention to how readily we take on different roles (leader, follower, communicator) to accomplish a shared task, thus satisfying all four of the SIE criteria.

Figure 8.3. Visitors playing Team Snake. Photography by Gayle Laird, © Exploratorium, www.exploratorium.edu.
SIEs come in different flavors. Team Snake is an example of a collaborative SIE. Other types of SIEs include social dilemmas, such as Sip or Squirt, competitive games, dialogue experiences, position taking, people watching, social self-reflection, and many others described in more detail below. They all share a combination of social content and social experience, even if experienced alone. Another hallmark of an SIE is the ability to repeat the social experience again with different variations and, in the process, inquire into the dynamics at play in the interaction.

These highly participatory examples of exhibits are in the center of “bull’s-eye” definition of SIEs. By contrast, exhibits at the periphery of the SIE definition, or even those excluded from it, tend to be more presentational. A large Science of Sharing infographic about sharing behavior across the world does not require inter- or intrapersonal social inquiry, even though it may support learning about social phenomena. When watching an amusing video about a fairness experiment in capuchin monkeys, visitors are neither themselves participants in the experiment nor learning directly from an interpersonal exchange. Artifacts, specimens, and works of art, as typically displayed in historical, art, and cultural museums, while clearly the product and expression of social interactions, do not require a social interaction in order to be experienced and are not typically open to experimental manipulation. Here, the line is blurry, however, since a painting of a human face in pain, for example, may engage a visitor’s social perception and even provoke social inquiry experiences within and between visitors. So, while object-based displays are not inherently SIEs, they can be framed in such a way that encourages social inquiry conversations or metacognition. The addition of observational or conversational prompts pushes an object-based exhibit from a peripheral SIE to a more central one.

Many SIEs are inspired by activities developed as programs, games, or workshops led by a live facilitator. Facilitated dialogue formats for museum settings have been pioneered by the Dialogue Social Enterprise group (Dialogue in the Dark, Dialogue in Silence, and Dialogue with Time), the Talking Circles that accompanied the Race: Are We So Different? exhibition created by the Science Museum of Minnesota and the American Anthropological Association, and other types of dialogue and “forum” programs, such as those developed at the Boston Museum of Science. The presence of a facilitator provides the flexible guidance that can steer and respond to the group and provide psychological safety for an open-ended experience and discussion. Facilitated programs can thus be the first step in prototyping experiences for stand-alone exhibits. SIEs, as defined here, while potentially benefiting from facilitation, do not require ongoing staffing and scheduling. They allow visitors to engage at their own pace without pressure, watch others, and dive as deeply into the experience as they wish.
SOCIAL INQUIRY EXHIBIT EXAMPLES

The types of SIEs listed below are meant to be inspirational, not exhaustive. Our goal is to spark ideas for developers and researchers working on social exhibitions. We begin with exhibits that fall in the center of the SIE category, but end this section with some exhibits at the periphery.

Collaboration

Team Snake, as described above, represents a collaborative social inquiry exhibit. Other collaboration exhibits from *Science of Sharing* involved group creative expression or problem solving, such as Collaborative Shapes, where visitors use a rope to make shapes together that they couldn’t make alone, or As One, where visitors mirror each other’s movements to explore the cooperative notions of leading and following.

Competition

Red vs. Blue is an SIE from *Science of Sharing* that is more of a competitive game. At the surface, the only purpose of the game is to see which side, red or blue, can push their color-coded buttons more often, reaching a higher score. Visitors can join either team at any time by pushing buttons at one of four stations and can switch sides at will (but they typically don’t). The game is periodically interrupted to provoke some metacognition about how easily we collaborate with some people in order to compete with others. Any competitive task with winners or losers can become an SIE, assuming that the social interactions form the content of the exhibit rather than act as a mere mechanism for involvement.

Social Dilemma

Sip or Squirt is a prime example of a social dilemma SIE. This kind of exhibit juxtaposes collaborative and competitive instincts. Social dilemmas figure prominently in social psychology and game theory, asking visitors to explore the balance of self-interested and collaborative behavior. Freeloader, also part of *Science of Sharing*, asks visitors to explore what is known as the volunteer’s dilemma, where the game continues only if one participant “volunteers” to sacrifice his interests for the group (Figure 8.4). The Tragedy of the Commons is another classic social dilemma, explored in exhibits such as Text Fish, where visitors engage in digital fishing on a screen via text messages from their phones, sometimes leading to overfishing and the depletion
of the shared resource. In the Survival Game, visitors explore the trade-offs of a gift economy by sharing cattle to endure droughts and poaching.

Self-Reflection

Several exhibits aim to help visitors notice, name, and reflect on their own internal states, biases, or thoughts. Implicit bias exhibits such as Sort and Switch, for example, help visitors see the ways that they respond to stereotypes despite professing different values. Oftentimes, metacognition can be promoted even at exhibits with other primary experiences. For example, at the Red vs. Blue competitive exhibit described above, the game was interrupted periodically to prompt visitors to reflect on how they formed teams, how they felt in the competition, and whether they’d be willing to switch teams partway through. At the Poker Face exhibit, one person tries to bluff another about the playing cards they’ve been dealt, prompting both people to reflect on how they catch others in a lie. In research connected to the Science of Sharing, questions such as “In your life, what strategies do you use to stop yourself from using stereotypes?” were shown to be effective in provoking visitor metacognition about social phenomena.  

Categorizing or Comparing

Exhibit prototypes for the Identity project encourage visitors to reflect on classification of self and others, according to personality or other socially defined identities in order to bring attention to implicit categories and sometimes even biases that visitors use in assessing others. Sort Yourself Out encourages visitors to choose between binary identity labels (“religious vs. not religious,” “cat person vs. dog person”), discovering that, in the process, sometimes, neither label fits. Another prototype, Mixed Bag, encourages visitors to assess their own privilege and then compare themselves to others with different backgrounds.

Story Sharing

This type of exhibit involves various prompts used to encourage visitors to share personal stories with each other. In Earliest Memories, which was part
of a collection called Why Stories Move Us?, visitors are given index cards to share stories from their early life and hang the cards with a clothes pin on a public display. Some of the stories shared were surprisingly moving and evocative. At an exhibit about stereotypes, called Unseen Stories, prompts on index cards encourage visitors to reveal ways in which they may feel stereotyped and stereotype others. Visitors hang the cards for others to read and feel permission to tell their own stories. In an exhibit called Sweat Detector, visitors can see their own galvanic skin response increase as their fingertip starts sweating while they recount embarrassing stories from adolescence. These exhibits might be viewed as resting outside the center, as the visitor interactions tend to either be asynchronous or live in a memory.

**Conversation/Position Taking**

This type of exhibit explicitly encourages discussion between two or more people about social phenomena. Often inspired by facilitated dialogue programs, exhibit formats used in *American Experiments*, such as Ideals and Images and Where Do You Stand?, aim to produce conversation between visitors without a live facilitator. Ideals and Images, for example, prompts each visitor to choose four cards with images that represent their thoughts and feeling about words such as democracy, equality, and security, and then, compare their choices with others, leading to rich conversation (Figure 8.5). Where Do You Stand? features a digital interface that invites a small group of visitors to first vote on issues, such as mandatory voting or protest strategies, then compare and discuss their votes with others, and finally, revise their votes based on a series of follow-up questions. #MyFellowCitizens at the National Museum of American History is an example of an exhibit that encourages people to take a stand for what they believe is the essential feature of citizenship (and then post a selfie with their statement to social media). This type of exhibit puts a premium on self-expression, personal choice, and, sometimes, personal reflection. It can often be a first step in a dialogue exhibit, such as Where Do You Stand? In Donation with Contemplation at the Exploratorium, visitors can choose to donate cash to different causes with the cumulative donated dollar bills creating a bar graph visualization of the aggregate visitor priorities. These examples vary in their location on the “bulls-eye” of the SIE category, as some struggle to encourage inquiry and experimentation (Ideals and Images) or mutual influence in real time (Donation with Contemplation; #MyFellowCitizens).

**Future Influence**

The Exploratorium has developed several exhibits in which visitors influence future visitors. For example, the museum stocks the Give-and-Take bowl every
morning with a small item of value (sunglasses, keychain, etc.). Visitors may take home any item in the bowl as long as they replace it with something of equal or greater value. Over the course of the day, visitors trade objects, sometimes, leaving treasures and, other times, leaving trash. At the Be Kind, Rewind exhibit, visitors view a short, animated comedy and are then asked to rewind it for the next visitor. Will they rewind, despite the laborious task required to do so? Will they leave it how they found it? One current prototype for the Street Smarts exhibition, the Pay It Forward Café, will allow patrons to purchase coffee or tea for the next customer. Again, these exhibits may lie outside the center of the SIE category given that visitor influence is unidirectional (from current to future), rather than bidirectional, as it would be in a simultaneous interaction.

Stranger Interaction

Exhibits such as Tell a Joke, currently being prototyped for Street Smarts, encourage people to interact with others (ideally, even people they don’t know). Red Phone is a curious exhibit that invites visitors to interact with others (sometimes strangers) in another part of the museum in order to solve a problem. Whisper Dishes, a common feature at many science museums, provoked conversations between strangers when the Exploratorium installed it in a public space in downtown San Francisco. Sometimes, the stranger is a person on video, such as the people laughing or yawning at the Social Contagion exhibit, where visitors find themselves mimicking the on-screen behaviors. Stranger interactions lie at the periphery of the SIE category because they need not focus on social phenomena. Whisper Dishes was originally conceived to help people think about the physics of sound, though it can easily be reinterpreted as an exhibit about bringing strangers together. Visitors using Red Phone often enjoy the experience without reflecting on the concept of cooperation or stranger interaction. Even Social Contagion can seem to be more about specific neurobehavioral responses than the general concept of social influence.
ADDITIONAL SIE IDEAS (NOT YET DEVELOPED)

In this section, we describe ideas for types of SIEs that have not yet been extensively developed by the Exploratorium. These include exhibits that we’ve tried to implement with mixed results, as well as promising ideas we haven’t tried yet but others may have. We offer them as additional inspiration in the hopes that others will join us in the effort to create SIEs.

Role and Norm Experimenting

Children’s museums are filled with dress-up and role-playing activities in which visitors take on adult roles or personas from other cultures. The Exploratorium has experimented with activities that encourage visitors to unilaterally break social norms to experience the power of internalized social conformity (e.g., looking up at the ceiling to provoke others to do the same). In the Dialogue in the Dark exhibition, blind guides facilitate group experiences in total darkness, trading typical power roles with sighted visitors. Activities to build empathy for refugees, such as the Walk a Mile in My Shoes workshops, developed by the Catholic Relief Services, could also be adapted to an exhibit format.

People Watching

The Exploratorium has experimented with several exhibits and supplemental graphics to promote people watching, but we haven’t yet succeeded in making these as compelling for visitors as we’d like. In well-trafficked areas just outside the museum, we placed observation prompts as stand-alone elements in seating areas. We’ve also added observational prompts to exhibits, with people-watching tips for spectators of direct participants. Although we haven’t yet seen the type of careful observation in these earlier attempts that we hoped for, Pay It Forward Café, set to open outdoors in the summer of 2019, will continue striving to reach this goal. We expect it will benefit from all the interesting behaviors people engage in when out in public. There will be outdoor tables and ample seating for people to sit, drink, and watch others engage in acts of generosity, gratitude, and other social interactions.

Public Choreography

Imagine a collection of people in a public plaza, a museum gallery, or on a street corner engaging in coordinated, intentional activity. They could be
dancing in perfect unison, walking backward in random directions, or even just sitting or standing at agreed-upon intervals. The group activity might be highly visible (unison dancers on a sidewalk) or almost imperceptible (participants discreetly imitating different passersby without being noticed). Public choreography experiences can vary from highly prescribed group actions (a precisely choreographed performance) or a mix of rules and open choices (games and improvisational structures in music, theater, and movement). Creating exhibits that coordinate these large-group behaviors without a facilitator may be difficult but perhaps worth experimentation.

**SOCIAL INQUIRY EXHIBITS AND EMPATHY**

Simply by virtue of the social interaction that defines SIEs, visitors at this type of exhibit must engage to some degree in “people reading,” a first step toward empathizing with others. For example, social dilemma SIEs, such as Sip or Squirt, often involve taking the perspective of another to anticipate their choices. SIEs that prompt visitors to notice, name, and reflect on their own social perceptions and interpretations of others may help heighten awareness of one’s people-reading skills.7

To design exhibits that effectively foster deeper empathic experiences, it is useful to take a closer look at the psychological nature of empathy. This is particularly important because misconceptions about empathy abound. For example, as reflected in the proliferation of workshops, interventions, and political discourse aimed at increasing empathy, there is widespread belief that merely having more empathy is associated with positive outcomes, such as more generosity, benevolent attributions for others’ behavior, and decreased polarization. Such efforts have contributed to what has been referred to as the “empathy craze,” and, because these efforts frequently neglect potentially harmful consequences of empathy, others have called for the promotion of “rational compassion” instead of empathy.8

Social scientists have documented that empathy is a psychologically complex concept with multiple dimensions. Complicating matters further, there is much theoretical debate about empathy—its definition, origins, and associations with related constructs. For the purposes of this chapter, we focus on three dimensions of empathy from a social psychological perspective:9

- Perspective taking (or cognitive empathy) refers to understanding of others’ thoughts and feelings without necessarily experiencing these feelings oneself.
• Affective concern (or empathic concern) involves identifying with others in distress, including experiencing the inferred feelings of others.
• Personal distress (or empathic distress) refers to the self-focused discomfort, tension, or anxiety that a person experiences in response to others’ suffering.

One can think of these dimensions as distinct motives for social action. In certain situations, these motives can be in conflict with each other and shape empathy experiences in unintended and potentially negative ways.

How might different empathy dimensions relate to exhibit experiences? To answer this question, it is important to keep in mind that empathy experiences are shaped by the context or situation in which the experience occurs; as with most affective states, people are frequently motivated to regulate empathy to attain goals that are relevant to them in a particular situation and may use a variety of psychological strategies to attain these goals. SIEs can be conceived of as situations that influence not only the amount of empathy a visitor may experience but also which dimensions of empathy will be primarily activated.

Take, for example, competitive games, which form the basis of competition SIEs. In the “game” situational context, the goal is typically to win. Here, perspective taking—empathically considering the opponent’s situation—should confer an advantage and, ideally, promote the goal of winning. In contrast, the second empathy component, affective concern—feeling outgroup members’ distress—is likely to weaken the competitive spirit, which competitors will want to avoid. Given conflicting motives at an exhibit involving competition, appropriate framing of the experience may be required for some visitors to engage with empathy. A game could be leveraged to heighten (1) insight into how competitive tendencies promote thinking about ourselves at the expense of others, (2) awareness of how easily we become arbitrarily polarized, or (3) reflection on the broader phenomena of dehumanization of outgroups.

The third empathy component, personal (or empathic) distress, can motivate people to help others to reduce their own distress that they may feel in response to others’ suffering. However, when personal distress becomes overwhelming, people use several psychological strategies to minimize their negative feelings, and these efforts can undermine the more prosocial manifestations of empathy. For example, people may engage in empathic avoidance (i.e., turn a blind eye to others’ suffering), blame those who are suffering for having contributed to their own misfortune, or direct hostility toward the perceived “bad guys,” who are seen as victimizing the suffering group. Although empathic avoidance, blaming the victim, and polarized hostility toward bad guys may be destructive in some contexts, they could be adaptive in others. A comprehensive approach to exhibiting empathy would foster visitor...
curiosity about these nuanced facets of empathic experiences, including those that result in less prosocial, or even hostile, behavior.

What about an exhibit project that specifically aims to strengthen primarily the most prosocial manifestations of empathy? Collaborative SIE experiences in particular may promote empathy in team members, especially if combined with elements that decrease outgroup bias and increase interdependence (i.e., team members have to rely on each other for successful task completion or goal accomplishment). Research has shown that group members who are working toward a goal together and are dependent on each other to attain it are more attentive to each other’s emotional states and have more favorable perceptions of each other. In addition, Conversation SIEs developed to encourage self-disclosure and compassionate listening could be a strong tool for fostering prosocial aspects of empathy. That said, merely having a conversation doesn’t ensure an empathic experience. Conversations can confirm stereotypes and even increase other barriers to empathy. Therefore, it is vital that exhibits prompt empathetic listening and support norms that inspire inclusive and open-minded dialogue.

One final caution from research on empathy: Increasing empathy is a complex process that isn’t likely to occur at a single museum exhibit. Although perspective-taking exercises have been shown to increase empathy in experimental studies, there is little evidence to suggest that these techniques predict longer-term increases in empathy. In addition, even when these techniques improve skills to imagine others’ cognitive or emotional states, those skills may not increase empathic concern or compassion, especially in competitive situations. Additional techniques that involve affirming people’s prosocial values may be needed to promote more compassionate stances toward others and minimize empathic avoidance. Although enduring changes in empathy are likely to require ongoing meaningful exchanges with others, perhaps a single exhibit experience can spark the curiosity and willingness to do so.

**SHAPING PROJECTS WITH SIES**

The decision to include SIEs in a museum depends on many factors, such as exhibition content, type of museum, and institutional readiness to experiment with and adopt this relatively new type of exhibit.

The first factor depends on the nature of the content that is being exhibited. Exhibitions about explicitly social phenomena are well suited to SIEs. Prosocial topics, such as empathy, altruism, generosity, collaboration, and sharing, are a cluster of highly relevant topics that offer promising ground for SIE development. Their mirror image of antisocial behaviors, thoughts, and
emotions, such as selfishness, self-centeredness, competition, and violence, is also equally important for museums to consider. Social dilemmas, which ask us to balance individual and collective interests, are highly relevant to engaging the public in discussing the trade-offs in environmental regulation, wealth distribution, and immigration policy.

Similarly, exhibitions that touch on human relationships, emotions, and identities also offer rich arenas for SIE development. Human relationships—be they in dyads or larger groups, be they romantic, familial, political, or professional—can be explored in novel ways through SIEs. The social basis of human social emotions, ranging from anger to love, jealousy, and compassion present another highly compelling range of topics. The social construction of the myriad human identities, be they racial, sexual, national, or personality based, is also well suited to the SIE genre. The recent focus in the news on identity politics, social polarization, immigration, and refugees makes SIEs especially timely. Both staff and funders are asking for increased social relevance connected to issues in the news.

A second factor that may influence museum adoption of SIEs depends on the specific type of museum and its comfort with interactive exhibits. Science museums and science centers, as long as they include social sciences (which isn’t a given [more below]), are already accustomed to interactive exhibits. Natural history museums can use this type of exhibit to facilitate exploration of social or policy trade-offs in addressing climate change or habitat conservation. Children’s museums with role-playing and cultural exhibits have long used some form of social exhibitry and offer a natural fit. Finally, SIEs could be especially well suited to history, anthropology, culture, and art museums, with their focus on human experience, as long as they are willing to supplement traditional collections with interactive experiences.

Despite the high potential currency and relevance of SIEs, there are, nonetheless, barriers to the adoption as well as proper scoping and budgeting for this type of work. The following factors can affect a museum’s institutional readiness to adopt SIEs:

1. Lack of knowledge about SIEs and their viability. SIEs are still a new type of exhibit and may feel risky to some museum professionals. Being neither “object based” nor “hands on” (two well-established categories of exhibitry), SIEs may be considered insubstantial. The fact that SIEs are completed and fully experienced only through the presence of real visitors can make them seem less significant than exhibits with photogenic objects, physical phenomena, or media at their center. Increased use, evaluation, and dissemination of SIEs will hopefully address this challenge.
2. Fears about ceding curatorial authority to the participating public. As with visitor-authored exhibits (a different but related category where visitors contribute content through written notes, media, or other interventions), a traditional curator might worry that SIEs leave too much up to the initiative of the visitor. Such exhibits may fail to communicate critical content or, even worse, foster fundamental misconceptions. Even when visitor engagement and authorship are educational goals, they can exist in tension with curatorial, content-transfer intent. But they needn’t be, especially if formative evaluation is used to ensure that the experience is aligned with, or at least complementary to, content goals. Adjacent exhibits of a more didactic type can also help anchor content messaging and background information. In working with curators and educators at the National Museum of American History, SIEs for the interactive “American Experiments” were placed adjacent to more traditional, object- and media-based collections of the Democracy: A Great Leap of Faith and Many Voices, One Nation exhibitions.

3. Questions about the “science” in social science. This objection to SIEs may be particular to museums with a definition of science that is biased toward the physical and biological sciences. Although seldom stated directly, the question “Is social science really science?” can be implied in some objections to SIEs at science museums. Empathy as a topic, in particular, might be caricatured as “soft,” “new age,” or overly “liberal,” for instance, by those who may believe that empathy interferes with rational and sound decision making. The historic bias against the social sciences can be rebutted by reference to the National Science Foundation’s inclusion of social, behavioral, and economic (SBE) sciences as one of their divisions. Productive conversations about evidence, objectivity, methodological limitations, and statistical truths in social (as well as other) sciences can grow out of talking about the science behind SIEs with “hard” science skeptics. In the end, exposure to engaging prototypes, evaluation reports, and finished exhibits has gone a long way to convincing a wide range of scientifically minded museum professionals of the merits of this type of exhibit.

4. Concerns that prosocial topics come across as preachy. In order promote genuinely open-ended social inquiry, the Exploratorium has tried to de-emphasize an exclusively prosocial stance in its exhibition. For instance, in Science of Sharing, we intentionally included many exhibits about competition to make the topic of sharing more interesting and realistic. We stressed that life’s choices involve not only collaborative but also competitive or “selfish” impulses. Truly allowing visitors to make choices about when to be selfish and when to be altruistic made for exhibits that spoke to the full spectrum of human possibilities. As we’ve discussed above, empathy can have negative consequences, and prosocial behavior can also
occur without empathic feelings or concern. We believe that by encouraging visitors to notice their own choices, whether prosocial or not, we help them reflect on their behaviors and act more intentionally in their lives.

5. Underestimating the need for prototyping SIEs. As physical objects, SIEs may seem simple and easy to develop. Quite the opposite is true. Simplicity is often achieved only after many rounds of prototyping and evaluation. SIEs can also require a steep learning curve for designers and evaluators, involving a combination of (a) immersion with social science research, (b) understanding of audience needs and sensibilities, and (c) personal self-reflection. Having some members on a team with related SIE experience can help others with the learning curve.

Despite these barriers, SIEs are increasingly being seen as viable and desirable to include in exhibitions. Funders, such as the National Science Foundation, have been supportive of this type of exhibit precisely because it addresses social questions that are both pressing for our time and relevant to diverse audiences. It can also be argued that the social sciences are an accessible entry point to the scientific method. Visitors can learn about double-blind experiments and statistical reasoning in situations that apply directly to their own lives. Finally, this type of exhibitry can be appealing to business leaders and philanthropists who recognize the importance of social learning for positive societal and workplace outcomes.

CONCLUSION

One of the challenges in making exhibits about empathy, as with many human phenomena, is that both exhibit developers and the general public are likely to have strong preconceptions about the topic based on personal experience, family formation, and moral teachings. Empathy is a commonly used word yet a nuanced phenomenon with many sometimes contradictory dimensions to discover. Empathy can be associated with prosocial actions and beliefs but is not always positive and helpful to others. It is multifaceted, involving many parts of the human psychological repertoire: Perceptual skills and emotional, cognitive, and behavioral responses that can play out in many different ways. By defining and illustrating a type of exhibit, the SIE, that puts the visitor into direct experiential engagement with other people, we are proposing a tool that we think is well suited to allowing visitors to explore the full, multidimensional nature of empathy.

SIEs are well suited to enable visitor exploration of many social phenomena, such as empathy, and many other aspects of the human experience. We may think that we know these phenomena, based on our everyday life and
common vocabulary. But exploring them through interactive, engaging SIEs that put direct human interactions at their center allows us to see them again in a new light, perhaps awakening fresh curiosity and launching a path toward more thoughtful inquiry that is both scientific and humanistic.

NOTES


2. The authors use the term “bulls-eye category” rather than the well-known phrase “prototype category” to reduce confusion with the expression “exhibit prototype,” which is commonly heard in museums (Rosch, Eleanor. “Principles of Categorization.” In Cognition and Categorization, edited by Eleanor Rosch and Barbara Lloyd. Hillsdale, NJ: Lawrence Erlbaum Associates, 1978). For further information, please


Chapter 8

SOURCES FOR MORE INFORMATION ON INQUIRY


