

**Monterey Bay Aquarium
Sharks and Rays Exhibition**

**Front-End Evaluation
July 2002**

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EXECUTIVE SUMMARY

This report presents the findings from a front-end evaluation of a proposed sharks and rays exhibition conducted by Randi Korn & Associates, Inc. (RK&A) for the Monterey Bay Aquarium (MBA). The evaluation was undertaken to help MBA staff find common ground among the content and interpretation of the sharks and rays exhibition and potential visitors. Data were collected in May 2002 from drop-in visitors at the MBA. The evaluation consisted of two data sets: storyboard interviews with 50 visitor groups and card-sort interviews with 30 visitor groups¹.

Only selected highlights of the study are included in this summary. Readers are urged to consult the body of the report for a detailed account of the findings.

I. PRINCIPAL FINDINGS: STORYBOARD INTERVIEWS

Perceptions of Sharks and Rays

All of the interviewees had strong associations and perceptions of sharks, while interviewees had milder reactions to rays. Overall, interviewees find sharks to be fascinating animals that evoke a mix of positive and negative emotions. Conversely, most interviewees thought of rays as gentle and graceful creatures, attributing their feelings to experiences diving with and touching rays.

Attitudes toward Sharks and Rays

Interviewees had varying attitudes toward sharks and rays. There were advocates and opponents for each. However, overall, fewer interviewees were knowledgeable or passionate about rays.

Reactions to the Storyboards

Overall, interviewees connected with at least one storyboard—either because it reinforced their existing attitudes toward sharks or presented new ways of thinking about these animals. As interviewees compared and contrasted the storyboards, a few misconceptions emerged; namely, the *Diving with Sharks and Rays* storyboard represents a contemporary, pro-conservation point of view, while the others are historical.

The *Hawaiian Stories* storyboard received the most positive comments, followed by *Diving with Sharks and Rays* and *African Masks and Dances*. *European and American Paintings* and *South Pacific Sculptures* received the most negative comments.

¹ Because of the homogeneity of the card-sort interviewees' responses, a sample size of 30 visitor groups was deemed adequate.

Opinions about a Cultural Interpretive Approach

Most interviewees wholeheartedly embraced the cultural interpretive approach for the new sharks and rays exhibition—both in terms of finding such a strategy compelling and valuing its educational message. Some expressed interest in the cultural approach but with a few caveats. Six interviewees had no interest in it.

Suggestions for the Sharks and Rays Exhibition

Being able to touch live sharks and rays was the potential exhibition experience most often mentioned by interviewees. Interviewees also frequently mentioned interactive exhibits, an immersive environment, animal feeding programs, and a live great white shark as desirable features.

II. PRINCIPAL FINDINGS: CARD-SORT INTERVIEWS

Perceptions of Sharks and Rays

Sharks evoked a complex mix of emotions and ideas among interviewees. While many described sharks as dangerous and fearsome, they also expressed an avid interest in and respect for sharks. Rays conjured fewer responses from interviewees. Some recalled positive experiences they had had touching rays or watching rays swim; others were unfamiliar with these animals.

Opinions about Shark and Ray Conservation

Three-quarters of interviewees said sharks should be conserved and protected for general pro-environment reasons as well as specific concern for sharks. One-quarter were unaware of problems facing shark populations or had reservations about conserving sharks. Interviewees spoke little of ray conservation issues, mainly because they lacked knowledge about these animals.

Statements about Conservation that Reflect Interviewees' Opinions

Many of the card-sort statements resonated with interviewees. Of the five statements that were selected by the most interviewees, three were general pro-environmental messages. The other two were more specific in that they stressed the role sharks play in their ecosystems and highlighted the fact that sharks' negative reputation contributes to their annihilation. The anti-conservation statements resonated with the fewest visitors.

When a subset of interviewees was asked to select one card that best reflected their opinion about shark conservation, the statements selected by the most interviewees were “I feel it’s important to preserve the diversity of all life on Earth” followed closely by “Sharks are important for maintaining the balance of nature.”

Interviewees' reasons for selecting specific cards were homogeneous and very general in nature. For example, interviewees were not able to articulate why shark and ray conservation is important beyond that it's simply the right thing to do.

Suggestions for the Sharks and Rays Exhibition

Interviewees gave numerous suggestions for the new sharks and rays exhibition. Most cited pro-shark educational messages they hoped would be included in the exhibition. For example, many visitors said they wanted the exhibit to include information that would dispel popular misconceptions of sharks as ferocious or bloodthirsty. Others described potential experiences they would like to see offered, including animal-touch tanks, immersive environments and feeding demonstrations.

DISCUSSION AND RECOMMENDATIONS

Interviewees overwhelmingly supported the plans for an exhibition featuring sharks and rays. While interviewees' responses to these animals differed greatly, they appreciated them as impressive creatures and welcomed the opportunity to see live sharks and rays at the aquarium.

Knowledge About and Attitude Toward Sharks and Rays

While interviewees were intrigued by both sharks and rays, they knew more about and had stronger emotional responses to sharks. Sharks evoked a complex mix of thoughts and feelings for interviewees. The movie *Jaws* was a common point of reference, as were television documentaries that highlight feeding behavior. In other words, the large, predatory, teeth-bearing shark loomed large in interviewees' minds—even though most understood that this is a biased portrayal of sharks. While fear certainly played a role in many interviewees' perceptions of sharks, so did awe, fascination and respect. Interviewees were fascinated by sharks' physical characteristics and amazed by the variety of sharks found in the world's oceans. Some were saddened that sharks are wrongly maligned and expressed concern for their survival.

Interviewees knew little about rays and had no cultural context for them. Most perceived rays to be gentle and graceful animals based on their experiences watching them swim or touching them at the aquarium. The experiences at touch tanks greatly impacted visitors by alleviating their fear of rays and creating personal connections with these animals. Interviewees looked forward to learning more about rays and seeing a wide variety of them in the exhibition.

Awareness of Conservation Issues Facing Sharks and Rays

For most interviewees, conservation issues figured little into their thoughts and perceptions about sharks and rays. Some interviewees had a vague notion that shark populations are declining, while others assumed that shark populations are healthy. A few interviewees were knowledgeable, discussing overfishing and mentioning action steps they had learned in *Vanishing Wildlife*.

When asked to talk about shark conservation in more detail, the concept that people and sharks can coexist simply by staying out of sharks' way was an undercurrent in many of the interviews. In particular, as interviewees compared the *Diving with Sharks and Rays* storyboard with the *European and American Paintings*, it became clear that in some cases the old misconception of sharks as blood-thirsty menaces had been replaced with a sentimentalized version of environmentalism in which sharks and people can coexist "if we just leave them alone."

In addition, interviewees had difficulty moving beyond the sound bites “We are all part of the circle of life” and “Maintaining the balance of nature is important” to taking action. Only a few interviewees grasped the true nature of shark conservation—protecting sharks requires active stewardship.

Several other misconceptions about shark conservation also emerged during the interviews. As with many environmental problems, some interviewees viewed shark conservation as someone else’s fault, condemning finning in China, for example, without acknowledging the role the American fishing industry also plays. Similarly, others suggested that educating the public about the true nature of sharks would prevent fear-based, targeted killing of sharks, as if this were the major reason for declining shark populations. A few also thought education efforts could be employed to teach beachgoers how to avoid shark attacks which, in turn, would decrease the number of shark attacks in the short term and improve public attitudes toward sharks in the long term. These comments demonstrate a misunderstanding of shark conservation issues.

Cultural Approach to the Sharks and Rays Exhibition

Most interviewees enthusiastically embraced a cultural approach to the sharks and rays exhibition. They were intrigued by both the images and the stories and noted that such items would add another layer of understanding to the live animals on display. They also valued the interpretive strategy’s implicit educational message—that other cultures respect and revere sharks rather than fear them. Others grasped the higher-level message—that attitudes toward sharks influence a culture’s desire to conserve and protect them.

Some interviewees valued the cultural approach but noted that the exhibition should also include live animals and biological information. Six had no interest in seeing how different cultures’ views of sharks, preferring to learn strictly about the biology of sharks. These interviewees had difficulty seeing how the cultural representations might convey conservation messages or biological information.

Interviewees’ were also asked to talk about their preferences for specific storyboards. Many liked the *Hawaiian Stories* storyboard because they immediately connected Hawaii with sharks. Conversely, they enjoyed the *African Dances and Masks* storyboard because it was surprising—they had never thought of Africans interacting with sharks. The least-popular storyboards—the *South Pacific Sculptures* and the *Northwest Coast Masks*—included artifacts that displayed abstract or stylized representations of sharks rather than realistic or figurative ones. Some interviewees could not discern the image of a shark in these artifacts, suggesting that they needed help knowing how to look at art from other cultures.

As interviewees talked about the individual storyboards, some of them misunderstood that the cultural artifacts were historical rather than representing living cultures. They considered *Diving with Sharks and Rays* to be the only contemporary representation. This sentiment and the fact that the image reinforced misconceptions about people’s relationship with sharks make this storyboard problematic. It was popular with interviewees, but was also misinterpreted—a cautionary note for its inclusion in the exhibition.

Recommendations

- Make explicit connections between the conservation message and the cultural approach through the big idea and exhibition text and media.
- Clearly outline the problems sharks and rays are facing, and provide action steps for visitors to take toward conserving sharks and rays.
- Carefully select and include a wide variety of cultural representations of sharks and rays. If possible, select living cultural traditions or those that have connections with contemporary cultural practices to reinforce that other perceptions of sharks have existed in the past and continue to do so today.
- Include a diversity of art disciplines—for example, include the visual, performing, and literary arts. This approach will have the widest appeal and provide points of entry for different learning styles.
- Visitors are likely to need assistance looking at, interpreting and understanding art from other cultures. Consider helping visitors to see the physical connection between a work of art and the animal it is intended to represent, or explain why the correlation does not exist in that type of art.
- Because of the powerful nature of such experiences, consider providing visitors the opportunity to touch sharks and rays with a touch-tank exhibit.
- Interviewees made a few consistent suggestions for the exhibition, including providing interactive exhibits, diving and feeding demonstrations, and immersive environments that enable visitors to feel as if they are swimming with the animals. Consider providing these wherever possible.

INTRODUCTION

This report presents the findings from a front-end evaluation of a new sharks and rays exhibition conducted by Randi Korn & Associates, Inc. (RK&A) for the Monterey Bay Aquarium (MBA). The evaluation was undertaken to help MBA staff find common ground among the content and interpretation of the sharks and rays exhibition and potential visitors. Specifically, the evaluation examined visitors’:

- perceptions of, associations with, and attitudes about sharks and rays
- responses to the cultural interpretive approach
- responses to Western and non-Western representations of sharks and rays
- reactions to the exhibit animals
- knowledge of shark and ray natural history, variety and geographic distribution
- awareness of shark and ray conservation issues
- opinions about shark and ray conservation

METHODOLOGY

Data were collected over one weekend in May 2002 from drop-in visitors at MBA. Two sets of interviews were conducted to achieve the evaluation’s objectives: storyboard interviews and card-sort interviews.

The purpose of conducting in-depth interviews is to encourage and motivate interviewees to express their opinions and feelings, recollect memories and associations, and share with the interviewer thoughtful responses to more complex questions. Open-ended interviews produce data rich in information because interviewees talk about their experiences from a very personal perspective.

Individual visitors or visitor groups with at least one adult, 16 years of age or older, were eligible to be interviewed. Participants were selected following a continuous random sampling method. According to this procedure, the data collector approached the first eligible visitor to enter a designated area and invited that visitor and his or her group to participate in the study. Once the interview was completed, the data collector returned to the designated area and intercepted the next eligible visitor.

All interviews were tape-recorded with participants’ permission and transcribed to facilitate analysis.

Storyboard Interviews

In the storyboard interviews, visitors were asked several questions about their perceptions of and attitudes toward sharks and rays and their opinions about the cultural interpretative strategy planned for the new exhibition. The interview guide was intentionally open-ended to allow interviewees the freedom to discuss what they felt was meaningful (see Appendix A for the storyboard interview guide and Appendix B for copies of the storyboards). A total of 50 group interviews were conducted with 120 visitors.

Card-Sort Interviews

In the card-sort interviews, visitors were asked an open-ended question about their perceptions of sharks and rays as well as their attitudes toward conserving and protecting these animals. Visitors were then asked to read a set of 22 cards and make two piles: in one pile were statements with which they agreed and in the other pile were statements with which they disagreed. Once they identified the cards they agreed with, they were asked to select one card that best reflected their attitude toward shark and ray conservation (see Appendix C for the card-sort interview guide and Appendix D for the actual statements). A total of 30 group interviews were conducted with 62 visitors.

DATA ANALYSIS

The interviews were qualitative, meaning that the results are descriptive. In analyzing qualitative data, the evaluator studies the responses for meaningful patterns. As patterns and trends emerge, similar responses are grouped together and these groupings are reported with quotations to exemplify visitors' experiences.

METHOD OF REPORTING

Following the qualitative tradition of data reporting, trends and themes within the interview data are presented from most frequently to least frequently occurring. Verbatim quotations from the interviews (edited for clarity) are provided in this report to illustrate visitors' thoughts and ideas as fully as possible. The quotations are intended to give the reader the flavor of visitors' experiences. Within quotations, the interviewer's questions appear in parentheses and, when more than one interviewee was present an asterisk (*) denotes a new speaker.

Findings from the study are presented in two main sections as follows:

- I. Storyboard Interviews
- II. Card-Sort Interviews

I. PRINCIPAL FINDINGS: STORYBOARD INTERVIEWS

Interviews with storyboards were conducted with 50 visitor groups. Of all the visitor groups that were approached and asked to participate in the study, 14 declined to do so, making the refusal rate 22 percent, similar to other museum evaluation projects. The 50 visitor groups interviewed were comprised of 120 visitors (see Table I.1). Slightly more than one-half were female and less than one-half were male (54 percent and 46 percent, respectively). Interviewees' ages ranged from 7 to 79 years. The average age of the adults was 34 years.² The average age of the children was 11 years.³ The majority of interviewees were repeat visitors (61 percent).

Table I.1.
Demographic Characteristics of Storyboard Interviewees

Characteristics	%
Gender (n = 120)	
Female	54.2
Male	45.8
Adults' Ages (n = 102)	
16 to 24	15.7
25 to 34	34.3
35 to 44	20.6
45 to 54	15.7
55 years or older	12.7
Children's Ages (n = 14)	
7 to 9	21.4
10 to 12	50.0
13 to 15	28.6
Prior Visitation (n = 120)	
Repeat visitor	61.0
First-time visitor	39.0

² Four adults declined to give their ages. Visitors 16 years of age and older were considered adults.

³ Two children—a seven-year old and an eight-year old—were younger than the minimum age requirement established in the recruitment protocol. However, they actively participated in the interviews with their parents and, as such, were included in the sample.

PERCEPTIONS OF SHARKS AND RAYS

All of the interviewees had strong associations and perceptions of sharks, while most interviewees had milder reactions to rays. Overall, interviewees find sharks to be fascinating animals that evoke a mix of positive and negative emotions. Conversely, most interviewees thought of rays as gentle and graceful creatures, attributing their feelings to experiences diving with and touching rays.

When asked to describe their associations with sharks, most interviewees expressed a mix of fear, fascination and awe, but also an understanding that sharks' negative reputation is biased and exaggerated. Many interviewees attributed movies, such as *Jaws*, documentaries focusing on large, predatory species, and news stories about shark attacks for their initial impressions about sharks. In fact, some were attracted to sharks because of their "dangerous" and "mysterious" reputations and their status as "the ultimate predator."

As the conversations continued, however, it became clear that sharks impressed interviewees on a number of other levels as well. Many admired sharks' physical characteristics (e.g., ever-replacing teeth, skin with denticles, cartilaginous skeletons, impressive size). Some were intrigued by the diversity of sharks, mentioning specific species such as hammerhead sharks, great white sharks, whale sharks, bull sharks, etc. Several interviewees had seen sharks on diving trips, an experience that gave them a stronger personal connection to sharks. Five interviewees noted the role sharks play in the environment and expressed concern that sharks are threatened. A few were amazed by the antiquity of sharks, while a few others simply described sharks as "graceful and beautiful" creatures. A selection of quotations is presented below to exemplify the range of responses.

*Sharks are probably the most mysterious thing. . . . I think [they] are probably one of the . . . things that people are most interested in. . . . (Do sharks and rays evoke any feelings or emotional reactions?) **For me just [the] scariness of the sharks. I always immediately think of *Jaws*. (That's understandable. I've heard that a lot today.) Well, thanks to [Steven Spielberg]. But that's what I always think is, 'Oh my God, they're scary.' They're going to bite you or eat you. But I think also, that's . . . something that the exhibit could definitely dispel . . . by letting [people] know what the true nature of the shark is. **That they're not all bad. *Yeah, they're an important part of the whole process of life in the sea. But, they're definitely scary to me.

*There are movies about the great whites, and I know that you're not going to have a great white here. But sharks are kind of an exciting fish to look at. They're so menacing. I think they're kind of neat, too. (What are some of your thoughts and feelings that you associate with sharks and rays?) *Fear! **Fear, intimidation, eaten alive! *They're scary, so there's that mystery about them. I wouldn't want to be in the water with a bunch of sharks. But they're fun to look at when they're on the other side of the glass. I guess that's kind of exciting. **Yeah, they're big, not knowing what—*What they'll do. Some eat you, and some don't. And, of course, whenever there's an accident or somebody's bit by a shark, it makes headlines all over the place. There have been some notorious ones in the past, especially back East.

(What comes to mind when you think of sharks and rays?) Sand sharks and hammerhead sharks. . . . We do a lot of snorkeling in the Caribbean, so we also see larger sharks. . . . For the most part, they're harmless. . . . I'm interested in knowing about the four major sharks that are not harmless, because we venture out into other areas and it's nice to be able to identify them and to understand some of what antagonizes them. . . . We've seen a lot of things on the great white—documentaries, bought a lot of Cousteau and just the local Discovery channel series on sharks. . . . (For you, when you think about sharks and rays what comes to mind?) *We see predators. . . . How they're very well built to do that. . . . The teeth are unbelievable, very sharp, [and] when they are broken, they grow back easily. . . . How wide they can open their jaws to eat all kinds of things.

*It's important to understand about all the different species of sharks and rays. We all know there's a lot of different types of sharks [but] do not understand what makes them different from each other. . . . In the general public, there's a lot of misconception about sharks and rays as dangerous animals; whereas, from what I've seen at aquariums, the majority are not. And you probably want public education, so there's not a culture of fear out there regarding these animals, but more a culture of appreciation for how they are. . . . (Do you have any other associations or thoughts or feelings about sharks and rays?) *We love them. We're divers. **We've had a chance to dive on some shark dives. *It's really cool. I know you can't have [sharks] in the touch area, but it's just kind of neat to get up close [to] them and watch them feed; that's kind of neat.

Many interviewees expressed positive feelings about rays. They often described them as “beautiful” and called them “graceful swimmers” (see the first and second quotations below). They also frequently talked about how much they enjoyed touching rays and how powerful these experiences were in overcoming their fear of rays (see the third quotation below). Several interviewees said they were fascinated by manta rays, mainly because of their grace and impressive size. In contrast, four interviewees said they were afraid of stingrays because they had known people who had been stung. A few did not have any opinions about rays, knowing so little about them.

The rays are like butterflies. They look really nice when they swim around. That's the best thing about the rays—the way they move their wings. They soar under water.

*(What are your feelings about rays?) They're really graceful when you watch them. They kind of float along and he could watch them all day. **Graceful. We saw the giant manta rays, [when] we went to Australia. . . . We snorkeled with the big ones, and they're impressive. They swam right at us and [we] thought they were going to swallow us up [but] they very gracefully slid down. They're incredible.

I'm an ocean-phobe. . . . But we just visited the ray tank down there, and totally overcame the fear of touching it. She loves rays. *I love rays. I'd hug a ray.

ATTITUDES TOWARD SHARKS AND RAYS

Interviewees had varying attitudes toward sharks and rays. There were advocates and opponents for each. However, overall, fewer interviewees were knowledgeable or passionate about rays.

Many interviewees expressed an appreciation for both sharks and rays but admitted to knowing little about rays (see the first quotation below). Some interviewees were fearful of sharks but not of rays. They described sharks as dangerous and rays as “friendly,” stemming from their experiences at touch tanks (see the second quotation below). Several were intrigued by sharks but found rays less compelling (see the third quotation below). A few were afraid of both sharks and rays (see the fourth quotation below).

(What is your attitude toward sharks and rays?) I’m not fearful in the sense that they’re monsters or anything. They’re actually quite beautiful. Both of those fish are quite beautiful when they swim. Graceful. Pretty. . . . I don’t know a lot about rays, but I find them as graceful as sharks, if not more so.

The rays seem friendly and the sharks seem predatory to us. My son really likes the danger element [that] the sharks have. I think that’s intriguing to him. . . . For the rays—we like the exhibit that’s downstairs where we can actually touch them. That’s kind of neat. And kind of all I can think of. **Well, the rays—they’re petable. They’re really neat and I like them, but sometimes I kinda get scared about the sharks. *We have a lot of questions about whether or not the sharks are trying to get us. So our attitude toward sharks, I guess, would be a bit of fear, but not really for the rays.

I’m always interested in . . . taking a look at sharks just because [of] the danger aspect. It’s kind of neat to go up and see [sharks] up close. Something that you wouldn’t be [able to do] out in the ocean. . . . But the rays I don’t talk about usually. (They just don’t captivate you and the sharks do?) Yeah. *I’d say my [opinion about rays] is more on the neutral side. It’s probably because my view is tainted with my [interest in sharks]. The rays—I haven’t seen any that have been terribly colorful, they’re not very . . . charismatic.

Scary—the sharks and rays. I always think of those as the more dangerous types of animals. (So you’re scared by both sharks and rays?) Mostly sharks. I think the rays are interesting, but I still think they kind of scare me. I don’t know much about the rays. . . . When you hear [about] the stingray, it’s [about how] they sting, so they must be painful and they must be harmful to people.

REACTIONS TO THE STORYBOARDS

Overall, interviewees connected with at least one storyboard—either because it reinforced their existing attitudes toward sharks or presented new ways of thinking about these animals. As interviewees compared and contrasted the storyboards, a few misconceptions emerged; namely, the *Diving with Sharks and Rays* storyboard represents a contemporary, pro-conservation point of view, while the others are historical.

The *Hawaiian Stories* storyboard received the most positive comments, followed by *Diving with Sharks and Rays* and *African Masks and Dances*. *European and American Paintings* and *South Pacific Sculptures* received the most negative comments.

All of the interviewees were able to find at least one storyboard that intrigued them. As interviewees described their preferences, they often contrasted one storyboard with another. Some interviewees described the storyboards with cultural artifacts and myths as “historical”; whereas, they identified the *Diving with Sharks and Rays* storyboard as “modern” or “current.”

In addition, several interviewees criticized the *European and American Paintings* storyboard for depicting outdated beliefs about sharks while they praised *Diving with Sharks and Rays* for representing the harmonious relationship humans and sharks currently have in Western culture—in other words, they replaced the old misconception with a new one. They assumed *Diving with Sharks and Rays* espoused a pro-environmental message, with a few interviewees contrasting the “respectful” relationship shown in this storyboard with actions of Asian cultures that fin sharks or use sharks for medicinal products. A few others believed the Northwest Coast masks, South Pacific Island sculptures and African dances represented traditions that are no longer practiced, rather than living cultures.

Interviewees’ specific comments for each storyboard are presented in the sections that follow.

Hawaiian Stories

Twenty-six interviewees were intrigued by the *Hawaiian Stories* storyboard. Most liked that the stories and myths described on the storyboard placed sharks in a positive light (see the quotation below). Some simply find myths about animals “interesting.” Several interviewees’ curiosities were piqued by the image of the boy interacting with a shark. This was especially true for children. A few said they were attracted to Hawaiian culture, in general, while a few others thought Hawaii would be familiar and relevant to Americans. None of the interviewees expressed negative opinions about this storyboard.

My first reaction [to] sharks [is] fear. But in this [storyboard], sharks are actually considered guardians and are worshipped in some cultures. I think it’s interesting to see a different side, a different approach to sharks.

Diving with Sharks and Rays

Twenty-four interviewees liked the *Diving with Sharks and Rays* storyboard. Most enjoyed seeing a diver interact with a manta ray and were amazed by the size difference between the large ray and the diver (see the quotation below). Several liked the scuba diving photographs because they are “more interested in science than art.” A few enjoy scuba diving and said the image exemplified the unique experiences offered by diving. One interviewee appreciated images such as this for dispelling negative perceptions about sharks and rays.

I like seeing the ray with the diver. . . . (You like seeing divers with animals?) It gives you a perspective of the size of a person in relationship to it [the animal]. It’s really huge and the human looks tiny.

Seven interviewees had negative responses to the scuba diving storyboard. A few said diving photography is commonplace and not as interesting as the other storyboards that depict cultures (see the first quotation below). A few others did not like the photographs because they object to humans interacting with wild animals, especially the feeding of wild animals (see the second quotation below).

*I’m not really into diving. It just doesn’t seem as appealing. There’s no history or historical message behind this part of it. All of these [other storyboards] have some sort of historical feel or reasons why it happened, or reasons why it’s in their culture. . . . This one [the diving storyboard] doesn’t. **Plus this is something [you see] when you turn the [television] channel. There’s always [a program] of people diving with things. People are conditioned to [seeing] that. So I think they’re probably less apt to really pay attention to this. Whereas, this [other] stuff is just neat. . . . *Yeah, I’ve never seen any of this stuff before.

I don’t go for that feeding stuff. (The photos of divers?) Yes. It says here [that] tour operations encourage feeding the sharks. I don’t think you ought to be feeding them, because what happens is pretty soon they don’t fear humans any more. They think of them as food. Or they associate [people] with food. So then I think that teaches them bad habits.

African Masks and Dances

Twenty-one interviewees made positive comments about the *African Masks and Dances* storyboard. Most liked the appearance of the hammerhead shark headdress, especially the fact that it “looks like a shark.” Some were intrigued that an African culture would interact with sharks and include them in their spiritual rituals, since these visitors do not generally associate sharks with Africa. A few found the idea of dance and music related to sharks appealing and suggested the inclusion of video footage in the exhibition. A few appreciated that the African dancers were showing respect for the sharks and supported this pro-shark message.

One interviewee disliked the *African Masks and Dances* storyboard. He did not see any connection between sharks and the images on this storyboard, explaining that the headdress did not look like a shark.

Australian Bark Paintings

Seventeen interviewees selected the *Australian Bark Paintings* storyboard as one of their favorites. Nearly all said the bark painting had visual appeal and looked different from the other representations of sharks (see the quotation below). A few were surprised to learn that Aborigines interacted with sharks, and a few others had an existing interest in Aboriginal culture. One liked that the bark painting was “realistic” and looked like a shark.

(What is it that fascinates you about the Australian bark paintings?) The color, the patterns, the otherness of it.

Two interviewees did not like the appearance of the bark painting, calling its colors drab.

European and American Paintings

Thirteen interviewees appreciated the *European and American Paintings* storyboard. Some interviewees thought the depictions of sharks in the European and American paintings would strike a chord with most people (see the quotation below). Others thought the paintings provided a historical context for current attitudes toward sharks. Two interviewees liked that the paintings showed shark attacks and were gory.

This one’s really interesting because it’s real. I think probably everybody can relate to this. (The European and American paintings?) Yes, because we’ve seen that . . . in the movies and stuff.

Fourteen interviewees had negative responses to this storyboard. Nearly all objected to the paintings because they reinforce negative stereotypes of sharks (see the quotation below). A few did not like the genre of the paintings or art, in general.

This one here is not going to give the mood you want. (The European and American paintings?) Yes. I think this is true that people are at risk of dying when they’re among schools of sharks, [but] it’s not the same historical perspective as the other [cultures]. It’s a fear perspective. . . . It’s making [sharks] out to be monsters and they’re not. I don’t think you’d want to support the negative image sharks already have.

Northwest Coast Masks and Dances

Twelve interviewees found the *Northwest Coast Masks and Dances* storyboard appealing. Most were intrigued by the fact that native people from the Pacific Northwest Coast incorporate sharks into their spiritual and cultural traditions. A few were immediately drawn to this storyboard, since they had an existing interest in cultures of the Pacific Northwest Coast. A few others liked how colorful the masks are.

Seven interviewees had negative opinions about this storyboard. Most did not see how the masks represented sharks. As one visitor said, “When I look at that [mask], I don’t see a shark.” A few said the colors of the masks were “garish.”

South Pacific Sculptures

Nine interviewees responded favorably to the storyboard with the South Pacific Island sculptures. Some appreciated the sculpture as a work of art (see the quotation below), while a few were attracted to the culture's "spiritual" connection with sharks. A few others had a general interest in the South Pacific.

(What about the South Pacific Island one do you like?) It reminds me of countless hours spent in the Met [the Metropolitan Museum of Art] in New York, just looking at the wonderful sculptures there. . . . This [the sculpture on the storyboard] is a piece of art.

Nine interviewees made negative comments about the *South Pacific Sculptures* storyboard. All said they did not like the sculpture because it did not resemble a shark (see the quotation below).

That one's a little too abstract, I think. (The South Pacific sculpture?) Yeah. (And by abstract, you mean?) Abstract, as in I can't see a shark or a ray in it.

OPINIONS ABOUT A CULTURAL INTERPRETIVE APPROACH

Most interviewees wholeheartedly embraced the cultural interpretive approach for the sharks and rays exhibition—both in terms of finding such a strategy compelling and valuing its educational message. Some expressed interest in the cultural approach but with a few caveats. Six interviewees had no interest in it.

Many of the interviewees praised the cultural approach as a unique and interesting premise around which to develop a new sharks and rays exhibition. Some thought this strategy would be particularly successful in dispelling fear-based beliefs about sharks by contrasting them with the beliefs of other cultures (see the first quotation below). Others thought sharks and culture were a natural pairing (see the second quotation below). Several said the cultural approach provided historical context and a way for people to connect with sharks on a personal level (see the third quotation below). A few suggested that a multi-cultural approach to sharks would be appealing to the aquarium's diverse audiences (see the fourth quotation below).

(Is there anything in particular that appeals to you about the cultural approach?) *The whole *Jaws* thing—it's an American thing. I think if more people see that sharks have been around for ages and ages, and they've been a part of other cultures [that] they [would] view sharks differently. I think that teaches people about the ocean as well as the sharks—that they're not this thing to always be feared. In many cultures they revere them. **I think it's a great approach just because it shows what other people think of sharks. When little kids come in to see sharks, if they're taught, [that] these are bad things, they're going to probably have less respect for them and think they're dangerous. *So, I think it's a great idea to show that cultures and societies in different parts of the world [react to] sharks.

When you think of sharks you always think of just a predator in the ocean, but there's always been an interaction between the two [humans and sharks]. . . . If you think about it, there are a lot of myths [about sharks]. You can see there's a lot of respect from around the world because of myths. So, I think the two belong together—don't separate the fish from the myth.

(What is your opinion about the aquarium having information about how other cultures think about sharks as well as the live animals?) I think it's a good link—present to past. And it extends the ocean . . . science studies into how it impacts people. I think anytime you can anthropomorphize a little bit, it's healthy. Because, that's what we need [to] get a more spiritual connection to the animals. . . . I think we need interpretation, and stories are very powerful ways to leave impressions on people.

(What is your overall opinion about the aquarium taking a cultural approach to interpret sharks and rays?) As far as [it being] educational, it's wonderful. You have such a diverse culture of people that come here. And for them to see . . . these articles [from] within their own culture and other cultures, and [see] how similar they are [would] be good.

Some interviewees had positive opinions about the cultural approach but also raised a few issues. Several emphasized that the live animals would be the primary draw and focus for them and the cultural artifacts would be secondary (see the first quotation below). Several others wanted to be assured that biological information would also be included in the exhibit (see the second quotation below). A few emphasized that they would object to “politically correct” representations of cultures (see the third quotation below).

I think it's good to have the cultural side, but it is the aquarium and people generally want to see the actual animals themselves. It's good to give perspective, so it doesn't have to be the dominant feature of the exhibit, just a part of it.

(Do you have any concerns about the aquarium talking about sharks from a cultural perspective?) Not at all. I think it's just interesting, the more information you get, the better. . . . It would also be interesting to see what their diet is and why their diet is that and [in] our particular area, the Monterey Bay, how many sharks are out there and what they are [eating].

(Do you have any concerns about the aquarium using a cultural approach?) Concerns? I think that it's going to be productive taking this approach, but I do think that maybe America has a love affair with portraying other cultures as being sort of utopian. In fact they may not be so utopian, and may be a little bit more savage and self-motivated than we might think they are. Western culture is not that much different in a sense. It's just that we have technology that can overstep our bounds; whereas these cultures didn't have the technology and maybe they would have taken all the fish out of the ocean if they could have. . . . So, I'm not sure it's that black and white. That other cultures have good relationships with sharks and we're hunting them to extinction.

Six interviewees were not interested in a cultural approach to a sharks and rays exhibition. Rather, they would like to see live animals and read biological information about them (see the quotation below).

I wouldn't take the time to read all of these cultural aspects of sharks. It's just not my interest. But I do know it's important to have it for school groups. I'm just only interested in the biological aspects, like how do [sharks] develop, how long is their gestation period, how do they nurse, how long do they live, what do they eat?

SUGGESTIONS FOR THE SHARKS AND RAYS EXHIBITION

Being able to touch live sharks and rays was the potential exhibition experience most often mentioned by interviewees. Interviewees also frequently mentioned interactive exhibits, an immersive environment, animal feeding programs and a live great white shark as desirable features.

Interviewees offered many suggestions for potential experiences in the sharks and rays exhibition. More than one-half of the interviewees mentioned that they would like to be able to touch live sharks and rays (see the quotation below). When those who did not mention it on their own were asked their opinion about the inclusion of a touch tank, all but two responded favorably to this idea. Two interviewees were concerned that rays do not like to be touched, that touching might injure the rays, and that touching wild animals sends the wrong message to the public.

I don't know how possible it is to actually touch sharks, but that might be interesting. (They're talking about having a touch tank in the new exhibition.) Oh, really? I think that would be very cool. . . . I think if you had more [opportunities] . . . like with the rays [where] kids can touch them, it [makes] them not so scary. They'll touch them and they won't hurt you. I think if you did that with the sharks, it would be very cool. I think the kids would absolutely love it.

Several interviewees with children complimented the interactive nature of the aquarium's *Splash Zone* exhibition, suggesting that the new sharks and rays exhibition also incorporate hands-on exhibits (see the quotation below). Others hoped the exhibition would include a glass tunnel, like those found at Marine World Africa USA or Sea World, which enable visitors to feel surrounded by sharks, as well as programs in which divers swim with and feed sharks. Others still would like to see a live great white shark on view at the aquarium, and asked about the feasibility of such a display.

[My kids] love everything hands-on, anything that they can touch and actually hold in their hand. It's just incredible for them. They could spend a lot of time at this, those areas like *Splash Zone*. . . . It seems like [it's] for the younger kids. They have the rubbings you can make. That's really cool because it's right there and it's almost like magic how you get this image come up through the paper. And it's something they can take home with them, too.

A few interviewees mentioned the inclusion of audio (e.g., oral histories, music), video (e.g., of the hammerhead shark dance), and performing arts programs in the exhibition. A few others suggested the following topics: shark babies (e.g., having egg cases, the hatching process, and baby sharks on display), prehistoric sharks, electric rays, Mayan artifacts, and stories from other American Indians (in addition to the Northwest Coast tribes).

II. PRINCIPAL FINDINGS: CARD-SORT INTERVIEWS

Interviews with a card-sort activity were conducted with 30 visitor groups⁴. Of all the visitor groups that were approached and asked to participate in the study, 13 declined to do so, making the refusal rate 30 percent, slightly higher than other museum evaluation projects. The 30 visitor groups interviewed were comprised of 62 visitors (see Table II.1). Slightly more than one-half were male and less than one-half were female (55 percent and 45 percent, respectively). Interviewee’s ages ranged from 20 to 75 years, with the average age being 39 years. One-half of the interviewees were first-time visitors, while the other one-half were repeat visitors.

Table II.1.
Demographic Characteristics of Card-Sort Interviewees

Characteristics	%
Gender (n = 62)	
Male	54.8
Female	45.2
Ages (n = 62)	
20 to 24	19.4
25 to 34	29.1
35 to 44	17.7
45 to 54	17.7
55 years or older	16.1
Prior Visitation (n = 62)	
Repeat visitor	50.0
First-time visitor	50.0

⁴ Because of the homogeneity of the card-sort interviewees’ responses, a sample size of 30 visitor groups was deemed adequate.

PERCEPTIONS OF SHARKS AND RAYS

Sharks evoked a complex mix of emotions and ideas among interviewees. While many described sharks as dangerous and fearsome, they also expressed an avid interest in and respect for sharks. Rays conjured fewer responses from interviewees. Some recalled positive experiences they had had touching rays or watching rays swim; others were unfamiliar with these animals.

For nearly all of the interviewees, sharks evoke a mix of fear, awe and fascination. Many interviewees talked about sharks being predators, using words such as “killers,” “vicious” and “efficient,” as well as conjuring images of teeth and feeding behavior. Similarly, some also called sharks “scary,” recalling the movie, *Jaws*. However, these negative reactions were coupled with more positive views. For example, interviewees often described sharks as “beautiful,” admiring how they swim and expressing an interest in seeing sharks in aquariums.

As the conversations continued, most interviewees tempered their initial negative remarks by explaining that much of sharks’ negative reputation is based on misconceptions. Some explicitly said that the public needs to understand the truth about sharks so they will want to conserve them. Several interviewees who dive or surf were especially cognizant of the exaggerated fear of shark attacks. A selection of quotations is presented below to exemplify interviewees’ responses.

What comes to mind when I think about sharks? Predators. Interesting to look at. (Anything else?) There are different types of sharks. Some are predators; some are not. Some are big; some are small. . . . I think people don’t have much information on them. They’re intimidated by them.

I watch the Discovery Channel, so . . . you think about them as being predatory animals. [But] people don’t usually get a chance to see them in the natural environment. You see them mostly . . . portrayed in shows [as] the villain, [like] in *Jaws*. I think about a lot of teeth. . . . But I don’t think they’re all dangerous. It can be like if you don’t bother them they may not bother you.

When I think of sharks in the water, I immediately think of how important it is to remain calm around them. We have been on dives [where] there [have] been sharks. It’s kind of interesting. It’s fun. . . . I just think [sharks are] very interesting predators. So [I do] not [feel] fear, but I guess it’s an anxiety coupled with respect. Because no matter where you go and no matter how big of a shark it is or how small, they still look like very efficient predators.

[Sharks] are beautiful and [they] are misunderstood [on] many points. And an aquarium like this can shed light on what’s not negative about the sharks and the misconceptions the public has. *Basically that animals need to be respected and not feared. Just learn more about them. . . . Yes, you may want to stay away from [sharks], but also understand them. So [the aquarium should] give the knowledge to people so they can know what sharks are all about.

Rays did not elicit the same reactions as sharks. Some had enjoyed seeing or touching rays (see the two quotations below). Others did not know much about rays. One interviewee was recently stung by a stingray and emphasized that the aquarium should inform visitors to shuffle their feet in areas known to have stingrays.

I lived in Hawaii for thirty years, and we would go to the big island [to this] restaurant where they feed the manta rays—the big ones. The manta rays would come in—they were bigger than this table—and . . . feed and you could watch them. Very graceful, beautiful animals.

I know very little about rays, but I'm not too scared of them because [I was] petting them up there [in the bat ray touch tank].

OPINIONS ABOUT SHARK AND RAY CONSERVATION

Three-quarters of interviewees said sharks should be conserved and protected for general pro-environment reasons as well as specific concern for sharks. One-quarter were unaware of problems facing shark populations or had reservations about the need to conserve sharks. Interviewees spoke little of ray conservation issues, mainly because they lacked knowledge about these animals.

Many interviewees thought that sharks should be protected to “maintain the balance of nature,” expressing varying levels of understanding about sharks’ role in the ecosystem. Some said, “It’s important to preserve all wildlife,” and simply extended their pro-conservation attitudes to sharks. Others noted that the “food chain” and “circle of life” would be disrupted if sharks were to become extinct (see the first quotation below). Several had specific reasons for wanting to protect sharks—namely, concerns about specific fishing practices or about misrepresentations of sharks in the popular media (see the second and third quotations below). A few wanted to conserve sharks for the enjoyment of future generations and for sharks’ potential medicinal uses.

I think you have to conserve everything. Everything fits into nature. As soon as you lose something it’s going to affect the rest.

I’ve seen programs on Discovery on the TV, and it seems like they’re taking too many sharks. . . . The ocean needs sharks, because they are scavengers and they clean things up. . . . They take the sharks for the liver, and they take the sharks for the fin and [then] they just discard the rest of it. And that’s not too cool. (That concerns you?) Yeah, because [it is] . . . just like the tuna. They’re taking tuna indiscriminately, and [tuna] are not going to last forever.

*I think that the old attitude of sharks being dangerous is passé. We now know that they’re fascinating [animals]. The dolphins and the whales have gotten all the press. Sharks have gotten all the bad press. . . . **[Sharks] are part of the environment, and they belong there. We probably don’t. We’re going into their environment, and it involves certain risks. And we can control that risk with shark nets and things like that in

places [where] people like to swim. . . . In Australia, we have shark nets. And how it all works, people don't really know how they work and things like that. You could show . . . how people can protect themselves against sharks as opposed to going out and hunting them. *And I guess I feel they've always given sharks a bad press and really it's not the real situation.

In contrast, some interviewees did not think shark conservation was particularly important. Five interviewees asked if sharks are endangered and expressed surprise when they were told that many shark populations are in decline. Three interviewees were unsure whether protecting sharks was important (see the first quotation below). Two said protecting people is more important than protecting sharks and suggested that shark conservation efforts be balanced with precautions to ensure the safety of swimmers (see the second quotation below).

All the wildlife shows [say], they're trying to kill off a lot of the sharks, because they kill a lot of people, which is true. So in a way, it would be a good thing to conserve them, but do we really need them? What would happen if we didn't have them?

I think it's important to conserve [sharks], but I think it's also important to maintain safety between sharks and humans. Because we like to go on a beach and we like to swim. (How would you balance those two desires in your mind?) I would say possibly setting aside places where, [you] . . . limit the interaction. Set aside some areas that are just natural habitats for sharks and [where] people who want to swim . . . have nets.

Interviewees did not make many comments about ray conservation. Some wondered if rays were endangered, while others wanted to know what role rays play in the environment. A few expressed interest in learning more about rays' population status and the impact of fishing on it.

STATEMENTS ABOUT CONSERVATION THAT REFLECT INTERVIEWEES' OPINIONS

Overall, many statements resonated with interviewees. Of the five statements that were selected by the most interviewees, three were general environmental messages. The other two stressed the role sharks play in their ecosystems and highlighted the fact that sharks' negative reputation contributes to their annihilation. The anti-conservation statements resonated with the fewest visitors.

When a subset of interviewees was asked to select one card that best reflected their opinion about shark conservation, the statements selected by the most interviewees were "I feel it's important to preserve the diversity of all life on Earth" followed closely by "Sharks are important for maintaining the balance of nature."

Interviewees' reasons for selecting specific cards were homogeneous and very general in nature. For example, interviewees were not able to articulate why shark and ray conservation is important beyond that's its simply the right thing to do.

Interviewees were asked to look at 22 statements for and against shark conservation and to select the statements that reflected their opinions (see Table II.2, page 18). Nearly all selected “Sharks are important for maintaining the balance of nature,” “I feel it’s important to preserve the diversity of all life on Earth” and “Sharks are unfairly targeted as a menace and are often killed out of fear or ignorance” as reasons for protecting sharks. “I find sharks fascinating” and “Sharks are ancient creatures and have lived on Earth since before the time of dinosaurs” were also selected by many interviewees, as were two generic environmental messages, “I feel that all of nature is sacred and should be preserved” and “I feel that all life has a right to exist.” Only a few interviewees selected “The world would be a better place without dangerous animals, like sharks” and “Conserving sharks is a job for biologists, fishermen, or policy makers; it’s not something I need to worry about.”

While interviewees looked at the statements, some had passionate responses (see the two quotations below). Others read the statements and made their selection with little discussion.

*Sharks do attack, so you have to be educated about it. . . . You have to protect yourself and [think about] safety. My mom and her husband are both master scuba divers, and they go out to the islands all the time [to] go diving with no problems. . . . I think that all animals have a right to live. . . . They have been here since before we have. I think they have been targeted unfairly in some places. People have fear. When [sharks] . . . were attacking in Hawaii, they were being killed. **There was that show we were watching where they were just killing them just for their fins. They were just taking their fins off and throwing them back into the water. *That’s terrible. Nature is important.

I think all creatures have a role in nature. Sharks may act as predators of some species, but that’s probably a way of culling out the herd—just balancing those species. And as far as sharks [being] unfairly targeted—they look menacing. They look ferocious. And we have the movies [that] show [sharks] as being bad, but it’s just those images. . . . Sharks aren’t really that way.

Table II.2.
Statements with which Interviewees Agreed (*n* = 30)

Statement	<i>n</i>
Sharks are important for maintaining the balance of nature.	27
I feel it's important to preserve the diversity of all life on Earth.	26
Sharks are unfairly targeted as a menace and are often killed out of fear or ignorance.	26
I find sharks fascinating.	23
I feel that all of nature is sacred and should be preserved.	22
I feel that all life has a right to exist.	21
Sharks are ancient creatures and have lived on Earth since before the time of dinosaurs.*	21
Shark populations are declining around the world due to pollution and overfishing.*	19
I appreciate the important role that sharks play in many cultures around the world (e.g., sharks are central to the creation stories of Native Australians and have spiritual significance to Hawaiian and Northwest Coast Indians).*	18
Sharks are similar to people in many ways (e.g., some are warm-blooded, give birth to live offspring, live to be 70 years old).*	18
There are lots of sharks still left in the ocean.	11
I worry that sharks are dangerous and can attack humans.	11
I enjoy swimming, diving, and/or surfing and am concerned about being attacked by a shark.	11
I'm a recreational diver and enjoy viewing sharks in the wild.	10
The world has more serious problems to contend with than trying to conserve sharks.	9
There's a limit to the number of environmental problems I can focus on.	9
Sharks are an important source of food and other products.*	6
Sharks are just big fish.	5
Sharks eat seals and sea lions, so fewer sharks means those animals would be safer.	4
Sharks have little use or importance for humans.	4
The world would be a better place without dangerous animals, like sharks.	3
Conserving sharks is a job for biologists, fishermen or policy makers; it's not something I need to worry about.	3

*During the course of the interviews, several interviewees were intrigued by, wanted to know more about, or asked for verification regarding these statements.

Seventeen of the 30 groups interviewed were also asked to select the statement that best reflected their opinion about shark conservation (see Table II.3). Interviewees had mixed responses. “I feel it’s important to preserve the diversity of all life on Earth” was selected by the most interviewees followed by “Sharks are important for maintaining the balance of nature.”

Table II.3.
Statement that Best Reflects Opinion about Shark Conservation (*n* = 17)

Statement	<i>n</i>
I feel it’s important to preserve the diversity of all life on Earth.	8
Sharks are important for maintaining the balance of nature.	7
I feel that all of nature is sacred and should be preserved.	4
Shark populations are declining around the world due to pollution and overfishing.	3
I feel that all life has a right to exist.	2
I find sharks fascinating.	2
I appreciate the important role that sharks play in many cultures around the world (e.g. sharks are central to the creation stories of Native Australians and have spiritual significance to Hawaiian and Northwest Coast Indians).	2
Sharks are unfairly targeted as a menace and are often killed out of fear or ignorance.	2
Sharks are ancient creatures and have lived on Earth since before the time of dinosaurs.	1
I enjoy swimming, diving, and/or surfing and am concerned about being attacked by a shark.	1
The world has more serious problems to contend with than trying to conserve sharks.	1
There’s a limit to the number of environmental problems I can focus on.	1

To demonstrate interviewees’ thought processes in selecting the statements that best reflect their opinions about shark conservation, two quotations are provided below.

‘Sharks are important for maintaining the balance of nature.’ Of all the cards, why did you pick that one?) Because I understand . . . that once you eliminate a piece of the chain, you start destroying the rest of it. I understand the importance of sharks as maintaining the balance in the oceans. (So if we did eliminate sharks, do you have any feeling about what might happen?) Well, of course whatever they tend to eat a lot start to explode in population and that affects everything else then. We do the same thing on land.

(You picked ‘diversity of life on Earth,’ why did you pick that one?) Because we [have] already lost so many species. Now that we know how dangerous it is, and how sad it is, we should try to conserve them.

SUGGESTIONS FOR THE SHARKS AND RAYS EXHIBITION

Interviewees gave numerous suggestions for the new sharks and rays exhibition. Most cited various pro-shark educational messages they hoped would be included in the exhibition. For example, many visitors said they wanted the exhibit to include information that would dispel popular misconceptions of sharks as ferocious or bloodthirsty. Others described potential experiences they would like offered, including animal touch tanks, immersive environments and feeding demonstrations.

Many suggested that the exhibition should dispel people's fears about sharks by addressing misconceptions, explaining the rarity of shark attacks and the reasons human attacks occur, as well as providing information about how to behave if one comes into contact with a shark (see the first two quotations below). Similarly, some thought the aquarium should showcase a variety of sharks to emphasize the diversity of shark sizes, behaviors and diets (see the third quotation below). Eight interviewees want to be able to touch sharks and rays (see the fourth quotation below); however, two wanted reassurance that the animals are not harmed by being touched and two others complained that the aquarium's current bat ray touch tank is not well designed because the rays are hard to reach. A few interviewees hoped the aquarium would be able to house a great white shark, would display large sharks and rays of any kind, and would demonstrate sharks feeding, including having divers feed the sharks. A few others suggested that the aquarium build glass enclosures or walk-through tunnels that allow visitors to feel as if they are in the water with the sharks, similar to a Sea World exhibition. Two interviewees wondered why sharks do not eat the other animals in their tanks and thought the new exhibition should address this question.

Let people know that sharks aren't dangerous and the killers that they're portrayed to be in movies and books and novels.

*It would be a good thing to show people sharks in their natural environment. Like even now in the tanks, you can see the sharks swimming around, and they aren't attacking the fish. . . . I think making people more aware that sharks aren't just dumb predators would be a good idea. **Maybe adding a few safety tips on what to do if you ever encounter a shark . . . would be kind of interesting, too. If they are concerned with being out in the water and swimming, how to avoid being attacked by a shark. *Less people die from shark attacks than people died last year skiing behind a boat . . . or car accidents. Compare and contrast the . . . real [risk] of shark attacks.

I think [the exhibition should show] the very broad diversity. We were saying they're carnivores, but I think many of them, like the largest ones, eat plants. . . . They're very ancient, and they've adapted in so many different ways and have been very successful. Focus [on that] rather than the assumption that all [are] man eaters—to broaden people's understanding of them would be good for the sharks.

*I want to be able to touch sharks. **Yeah. . . . We went to an aquarium in Chicago or in New Orleans, I can't remember. . . . There was a baby shark that they let people stroke the top [of it]. That was neat. I think she did it three times. **It was really cool. *That was really good. It was her favorite part of the whole [trip].

Appendices removed for proprietary reasons