Living Liquid Exhibit Cluster

East Gallery – Formative Evaluation

Joyce Ma

October 2010

THIS IS **NOT** A DEFINITIVE FINAL REPORT

FORMATIVE evaluation studies like this one often:

- **are conducted quickly**, which may mean
  - small sample sizes
  - expedited analyses
  - brief reports

- **look at an earlier version** of the exhibit/program, which may mean
  - a focus on problems and solutions, rather than successes
  - a change in form or title of the final exhibit/program

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SUMMARY OF KEY FINDINGS

What did visitors find interesting?
On a 5-point scale from *Not Interesting* (1) to *Interesting* (5), visitors found the cluster *Somewhat Interesting* (4). Visitors gave various reasons for finding the cluster interesting including: 1) They have an interest in the content area. 2) It's new to them. 3) They found the organisms appealing. 4) They liked a particular exhibit. There was no one dominant reason.

What did visitors find confusing?
On the other hand, a few visitors thought the cluster could be improved. The most frequent complaint visitors had was that there was not enough information at the exhibits. Some visitors pointed to *Turbulent Orb* (24%), *Marine Algae Vessels* (21%), and *Nourishing Wind* (15%) as the more confusing exhibits; they were not sure what these exhibits were supposed to show.

What connections did visitors see between the elements in the collection?
Regarding the overall theme, a majority (64%) of the visitors thought that the exhibit cluster was about marine life. Those who did not talked more generally either about biology or about aquatics. A very small minority (less than 5%) either had no idea or thought the exhibits were about something completely unrelated to life or water (e.g., learning).

Although most people were able to articulate an overarching theme to the collection, a few exhibits seemed to be the 'odd-man-out' in the cluster. More specifically, a few visitors were puzzled by *Turbulent Orb* (22%) and at a smaller percentage, *Nourishing Wind* (14%). The reasons visitors gave for why these two exhibits did not seem to belong varied. It did not necessarily have to do with the fact that neither had any living creatures; for example, a few of these visitors thought that these exhibits had less explanation or appeared to be more like artwork compared to the rest of the collection. Note that these were two of the three exhibits that were re-contextualized from other collections, specifically from *Turbulent Landscapes*. The third exhibit, *Tidal Pool Tank*, which was re-contextualized from the life sciences collections, seemed to better integrate with *Living Liquid*; only one person (out of 49) said that *Tidal Pool Tank* did not seem to belong[1]. Although these percentages are low, the finding suggests that the challenge of re-contextualizing exhibits, not surprisingly, depends on the degree and nature of the differences between the exhibit's old home and its new home, and that label rewrites may not be enough in some cases.

Did Living Liquid convey the abundance and diversity of microscopic life in the oceans?
Most visitors left the exhibit cluster thinking that the bay is abundant (75%) with a diversity (79%) of microscopic life. Over seventy percent pointed to specific exhibits in the collection that helped impart or heighten this awareness, a visitor goals of *Living Liquid*.

Did visitors see any personal relevance in the collection?
A little over 70% of the visitors noted some type of personal connection to *Living Liquid*, with 27% of visitors reporting having experienced or seen something in the cluster in their own lives. Although the percentage is already high, we found a higher percentage (86%) of visitors who in a separate, front-end study articulated a connection between the small marine life in the bay and their own lives, *without* having just visited *Living Liquid*. This difference suggests an opportunity to make *Living Liquid* personally relevant to more visitors.

[1] because it was not interactive like the others he saw.

How did visitors perceive the environment of the exhibit collection?
Overall, visitors felt that the cluster environment was *Somewhat Fun, Somewhat Cheerful, A Little Barren, Somewhat Polished,* and *Somewhat Cohesive*.

BACKGROUND

Living Liquid (Figure 1) is an exhibit cluster focused on the charismatic microfauna and flora of San Francisco Bay and the larger oceans, and is the first in a series of experiments to create a new marine life area in the East Gallery at the Piers. For its first iteration, *Living Liquid* was placed in the Exploratorium's Life Sciences Area at the Palace of Fine Arts. The East Gallery team developed over eight new exhibit prototypes and one demonstration (Figure 2), and re-contextualized three exhibits (Figure 3) that previously sat within other Exploratorium collections for this experimental cluster. Darcie Forman and Michael Brown were brought in as consultants to try environmental treatments to effect a sense of the abundance of the diversity of life in the oceans and San Francisco Bay.

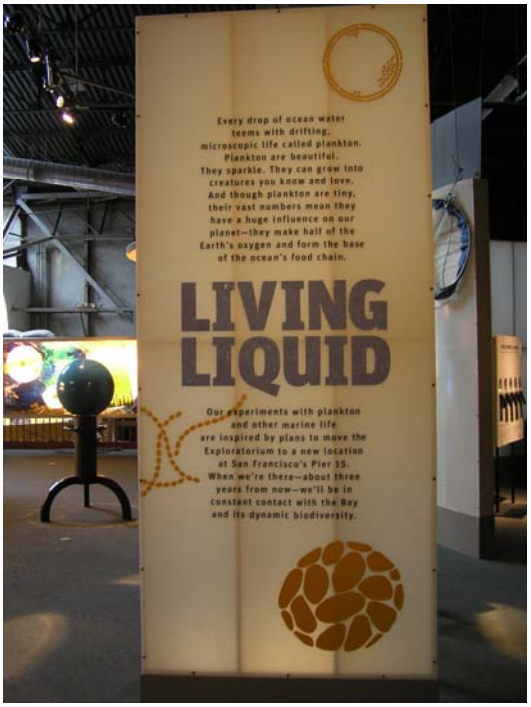


***Figure 1. Living Liquid* at the PFA**

Plankton Ballet

Marine Algae Vessels

Lounge Projection

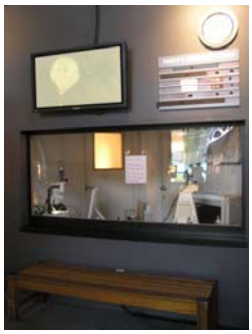
Plankton of SF Bay – Wall

When Water Turns Red

Plankton Net

Plankton of SF Bay – Log Book

Photobacteria



Plankton Demo Station

Figure 2. **Exhibit Prototypes – New Builds**

Tidal Pool Tank

Turbulent Orb

Nourishing Wind

Figure 3. **Exhibit Prototypes – Re-contextualized Exhibits**

PURPOSE

This study sought to learn about visitors' reactions to this first prototype of *Living Liquid* to inform the cluster's next iteration. More specifically, this study looked to answer:

- What did visitors find interesting about *Living Liquid*?
- What did visitors find confusing about the cluster?
- What did visitors think the cluster was about? In particular, did they feel that the exhibits belonged together? Did the cluster give visitors a sense of the abundance and diversity of life in the oceans and the bay?
- What personal relevance did *Living Liquid* have with the visitors' own lives?
- How did visitors describe the ambience of the cluster?
- Did the exhibit provoke visitors' curiosity? What questions did visitors have upon leaving?

METHOD

An evaluator stood at an exit of the *Living Liquid* area and approached every third visitor, 8 years old or older, as they exited. We asked the visitor if s/he had spent time looking at the exhibits in the exhibit cluster. If the visitor reported that s/he had, we would then ask for an interview. The interview questions can be found in Appendix A.

DATA COLLECTED

N = 56 interviews were collected on the following days:

Date	Day of the week
August 11, 2010	Wednesday
August 14, 2010	Saturday
August 18, 2010	Wednesday
August 22, 2010	Sunday
August 25, 2010	Wednesday
Sept 4, 2010	Saturday
Sept 18, 2010	Saturday
Sept 26, 2010	Sunday
Oct 3, 2010	Sunday

for the following visitors:

Gender	Count out of 56
Female	28
Male	28

Age Group	Count out of 56
Child	4
Teen	6
Adult	44

RESULTS

What did visitors find interesting about *Living Liquid*?

On a 5-point scale from *Not Interesting* (1) to *Interesting* (5), visitors found the cluster *Somewhat Interesting* (*Mdn* = 4). Visitors found *Living Liquid* interesting for the reasons shown in Table 1.

Table 1. **Reasons visitors found *Living Liquid* interesting**

Reason	Count out of 56	Example Visitor Responses
They have an interest in the content area.	12 (21%)	Visitor2: I am a physician, I am interested in bio. Visitor17: I like biology vs. physics. Visitor28: I like the ocean. Visitor46: Water is attractive to anybody [me].
It's new to them.	11 (20%)	Visitor10: because I didn't know about a lot of it, all things I didn't know Visitor18: all the different things that I've never seen before Visitor34: I didn't know this stuff before. It's all new to me. Visitor55: It's stuff I don't normally get to see everyday.
They found the organisms appealing.	10 (18%)	Visitor9: We like the bugs. [organisms in *Plankton Ballet* and *When Water Turns Red*] Visitor38: I like how it goes over different kinds of plankton, and the halophilic bacteria. Visitor43: all the plankton, fish and snails Visitor56: the plankton
They liked a particular exhibit.	10 (18%)	Visitor13: I liked the plankton exhibit. Visitor25: I liked the plankton on the wall. Visitor31: I love the table projection - want one in my house. I also like the *Plankton Ballet.* Visitor45: the globe thing

Reason	Count out of 56	Example Visitor Responses
It's relevant to the environment.	7 (13%)	Visitor14: makes me think of the BP oil spill and how it's now at the phytoplankton level and they aren't looking at how that will affect everything else. Visitor39: It was relevant to the [local] area.
It's interactive.	6 (11%)	Visitor20: the hands-on part Visitor51: I like rolling things
They get to see things up close.	4 (7%)	Visitor31: like how you can get very close, see something up close that you can't normally see Visitor51: There [*Plankton Ballet*] you get to magnify plankton.

Some visitors found *Living Liquid* less interesting. Their explanations are summarized in Table 2.

Table 2. **Reasons visitors found *Living Liquid* not interesting**

Reason	Count out of 56	Example Visitor Responses
There's not enough information.	6 (11%)	Visitor9: It would be nice to have more text and information on it. I don't understand what the river marks are. Visitor12: I liked the wind/water thing, but it needs to be better explained about wind vs. hurricanes and the type of currents they make. Visitor35: not much information, not very educational
The environment can be improved.	4 (7%)	Visitor37: It needs more lights. Visitor40: a lot of blank space, not visually stimulating
It's not interactive enough.	2 (4%)	Visitor33: less hands-on than most of the museum
It's nothing new.	2 (4%)	Visitor7: you can see aquariums like that in people's houses, so is the cost of maintaining it worth the benefit to the museum?

What did visitors find confusing?

A few visitors were confused by the exhibits listed in Table 3. A complete listing of visitors' comments about what was confusing, organized according to prototype, can be found in Appendix B.

Table 3. **What visitors found confusing**

Exhibit	Count	Examples from visitors' interviews
Turbulent Orb	8 out of 46 (24%)	Visitor6: I want to know why it was easier to turn it counter the way the water was going, seems like it would be the opposite. Also, it needs to be labeled better, so that you know it is about currents. Visitor22: maybe it could explain more about earth's currents. … Most exhibits have explanations, but that doesn't have an explanation. Visitor45: I thought it would reproduce the motion of the earth's ocean, but it doesn't do that. So, I was confused because I couldn't do what I thought I was supposed to do. Visitor51: I didn't get what it was trying to do. I didn't have instructions so I couldn't tell if it was suppose to be the atmosphere or something else.
Marine Algae Vessels	7 out of 34 (21%)	Visitor9: why the algae spins - Is it just there so kids can play with it while their parents read the text? Visitor33: What it was demonstrating was confusing. Visitor35: I didn't know its purpose. Visitor50: It had to do with how the air moves different shapes, but I need to read it again.
Nourishing Wind	5 out of 43 (15%)	Visitor12: could use more explanation on wind w/water Visitor18: It was hard to understand; we didn't get it at first. Visitor45: I couldn't tell that wind was being produced.
When Water Turns Red	3 out of 47 (9%)	Visitor11: We wanted explanation of what was in the salt. Visitor15: What are they doing? couldn't tell if they are eating, cleaning, or swimming
Tidal Pool Tank	1 out of 49 (3%)	Visitor32: the aquarium - I don't see what I'm supposed to do with it. I am a hands-on person who likes to interact with the exhibits, not read.

What connections did visitors see between the elements in the cluster?

What did visitors think Living Liquid was about?

Over half (64%) of the 56 visitors we interviewed thought the cluster was about marine life. Some visitors believed that the collection was more specifically about plankton (21%), small marine life (16%), or the aquatic life in the San Francisco Bay (5%). However, a few visitors thought the collection was about life but not necessarily about marine life, while others felt that it was about water or the ocean but did not mention life or biology in any way. See the Venn diagram in Figure 4.

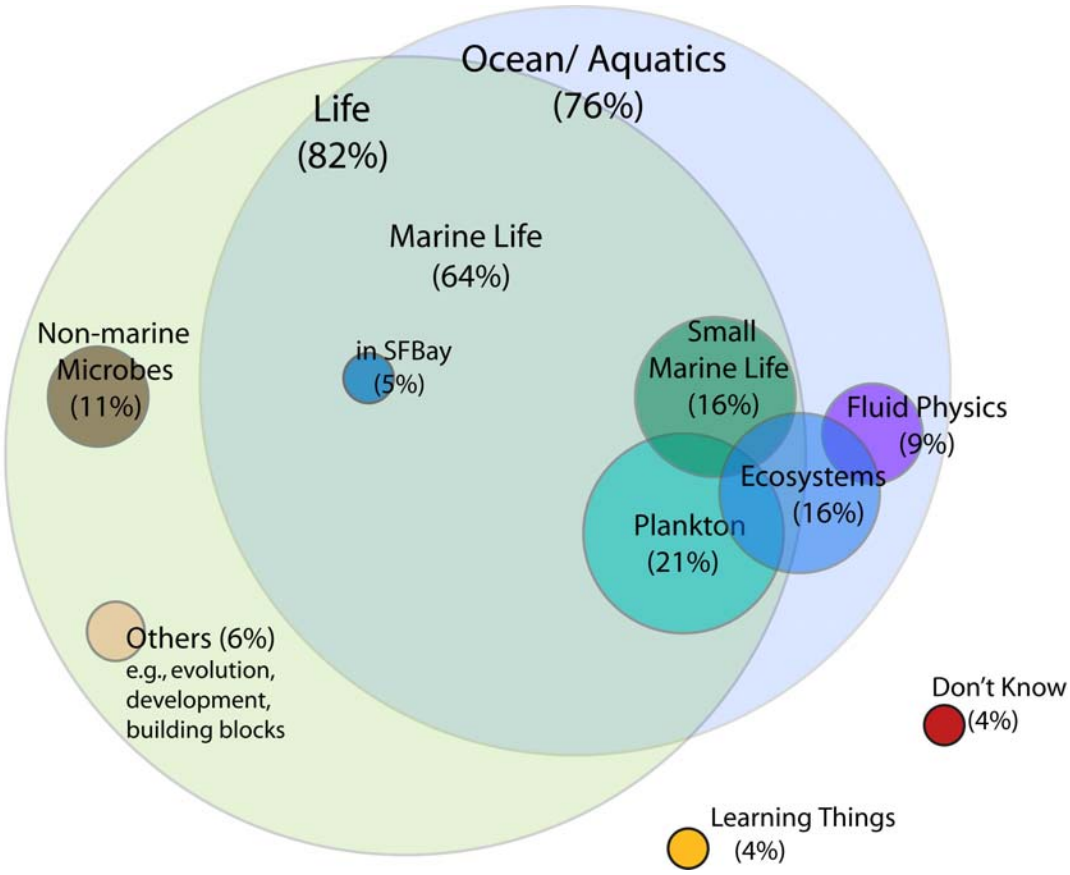


Figure 4. *A Venn diagram of the overarching themes, according to visitors, of the Living Liquid cluster*

Were there any elements that visitors thought didn't belong?

Fifteen (27%) of the visitors we interviewed felt that some of the elements did not belong in the cluster. See Table 4. In some cases, visitors were simply confused as to what the exhibit was about and could not determine how it fit into a larger theme.

Table 4. *Exhibits visitors felt did not belong with the larger collection*

Exhibit	Count	Example response from visitors
Turbulent Orb	10 out of 46 (22%)	Visitor6: The currents should be in a fluid dynamics area not in a biology area. Visitor20: the spinny thing. I didn't see any animals or bacteria. It didn't have to do with life. Visitor30: Some of the stuff is so local, but the globe is so global. Visitor33: globe, because the rest is biological and that I assume is about water flow
Nourishing Wind	6 out of 43 (14%)	Visitor14: [*Turbulent Orb* and *Nourishing Wind*] have the least significance to the scientific explanation of plankton. They are pretty and eye catching, and may serve an artistic function, but they don't fit in as hard science as much. Visitor19: The liquid physics and movement seems kind of different. Visitor35: It's more artwork, kind of fun, not educational.
Tidal Pool Tank	1 out of 49 (2%)	Visitor32: the aquarium because it's not interactive
Marine Algae Vessels	1 out of 34 (3%)	Visitor49: whatever that green things is. I guess because it's kind of ugly and uninteresting.
When Water Turns Red	1 out of 47 (2%)	Visitor10: almost have to say the ants [brine shrimp] because from what I see, this is all water stuff
Plankton Net	1 out of 15 (7%)	Visitor7: I don't know what it does. Does it catch the plankton?

Did the cluster give visitors a sense of the abundance and diversity of life in the ocean and bay?

To gauge visitors' perceptions of the microfauna of the bay, we asked the people we interviewed what they thought they would see if they were to look at a drop of bay water under the microscope. Because the nearby Microscope Imaging Station was featuring plankton but was not considered part of the *Living Liquid* cluster, we eliminated responses from those visitors who reported having stopped at the Imaging Station. Figure 5 shows a Wordle word cloud of what visitors thought they would find in a drop of water. Note that a plurality of visitors mentioned plankton.

In a separate front-end evaluation study, we had interviewed different visitors in a section of the Exploratorium physically removed from *Living Liquid* about their impressions of the San Francisco Bay. As one of the questions in that interview, we asked visitors, "What is the smallest living thing you can think of that lives in the bay?" Thirty-two percent (32%) out of the 115 visitors in the front-end study mentioned plankton compared to 53% of the *Living Liquid* visitors. That is, visitors who had visited *Living Liquid* were more likely to talk about plankton, χ^2 (1, N = 166) = 6.43, p = .011.

Figure 5. *Wordle visualization of the items visitors thought they would see in a drop of water placed under a microscope. The relative frequency of a term is approximated by its relative height.*

In addition, a majority of visitors (75%, 41 out of 55) thought the bay is abundant with microscopic life, and a comparable percentage (79%, 43 out of 55) believed they would find a variety of things in a sample of bay water. When probed further, 71% (39 out of 55) of the visitors pointed to an exhibit or set of exhibits that helped them think of the bay as being abundant in diverse microscopic life (Table 5).

Table 5. *Exhibits that helped reveal the abundance and variety of microscopic life in the bay*

Exhibit	Count
Plankton of SF Bay (log book and wall)	14 out of 31 (45%)
Plankton Ballet	13 out of 37 (35%)
Photobacteria	1 out of 3 (33%)
Plankton of SF Bay-Wall (no mention of log book)	3 out of 20 (15%)
When Water Turns Red	6 out of 47 (13%)
Tidal Pool Tank	3 out of 49 (6%)
Nourishing Wind	2 out of 43 (5%)

What personal relevance did the cluster have for visitors?

Sixteen visitors (29%) did not see any connection between the cluster and themselves. However, a majority of the visitors did, with a plurality noting that they had personally seen or experienced something similar in their own lives. See Table 6.

Table 6. *Exhibits that helped reveal the abundance and variety of microscopic life in the bay*

Type of Connection	Count out of 55	Example Connection Type
It's something they have personally seen or experienced in, on, or near the water.	15 (27%)	Visitor3: visiting tide pools, rip tides, currents living in oceans Visitor14: Because we are scuba divers, we are familiar with the things in the aquarium. Visitor18: We spend time at the beach and you get to see all the turbulence.
It's related to something they do, not specifically tied to the ocean.	7 (13%)	Visitor37: I deal with mold for a living, [cheese] so tiny things are important to me. Visitor33: I'm a biologist.
The ocean or bay is a part of their lives and identity	6 (11%)	Visitor1: We lived near the ocean for 15 years - but now we live in the Midwest. Visitor28: We live in Monterey, so this is our life.
They have a fish tank.	4 (7%)	Visitor50: We have fish tanks at home.
It's a metaphor about their own lives	2 (4%)	Visitor32: I think both the globe and the wind/water remind me of humans - being confused, out of control, too busy - humans being caught in the whirl wind of life.
It's something they've seen on mass media	2 (4%)	Visitor17: I was watching a TV program about shipwrecks becoming the basis for life - becoming coral reefs, things landing on them.
They had no answer.	2 (4%)	Visitor44: I don't know.
We're all connected.	2 (4%)	Visitor31: It provokes awareness of inter-connectedness and that we need it.
We're all living things.	1 (2%)	Visitor24: I mean it's life, and we're life.

Surprisingly, when we asked visitors in a separate front-end study about their connections to the small living creatures in the San Francisco Bay, 86% of the respondents saw a relationship between themselves and small marine life. This is *higher* than the percentage of visitors who had just seen *Living Liquid*, χ^2 (1, N = 170) = 5.611, p = .018.

How did visitors describe the ambience of the cluster?

The team in consultation with Darcie Forman and Michael Brown sought to create an engaging, cohesive environment to convey the vitality and the mystery of life in the oceans. To gauge how visitors perceived the space, we asked them to describe the *Living Liquid* area according to a set of bipolar scales[2]. Figure 6 shows visitors' ratings. Overall, visitors felt that the area was *Somewhat Fun, Somewhat Cheerful, A Little Barren, Somewhat Polished,* and *Somewhat Cohesive*. They perceived the area as being neither relaxing nor exciting.

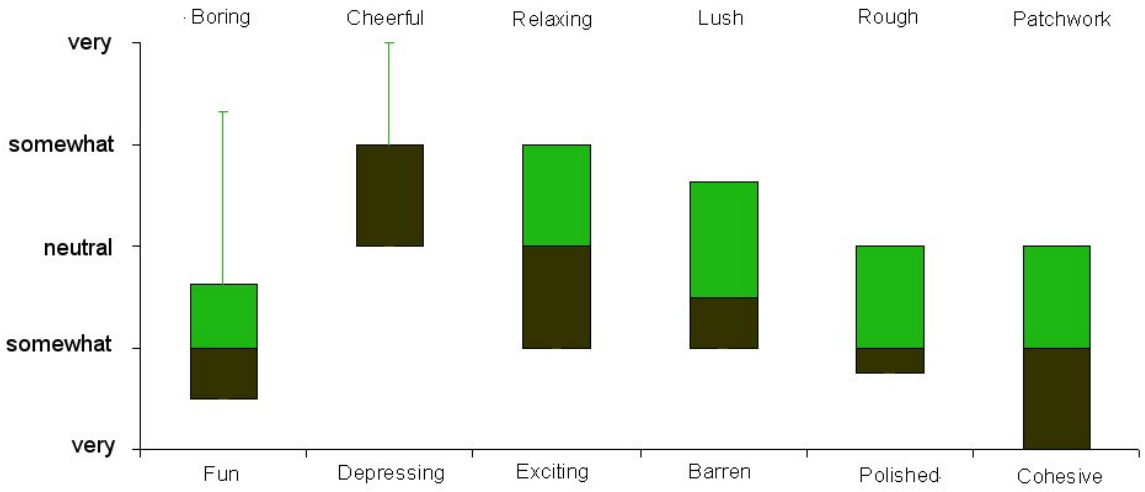


Figure 6. **Boxplot of visitors' descriptions of the *Living Liquid* area**

We also asked visitors if any additional words came to mind in describing the area. Figure 7 shows the Wordle visualization of the words visitors themselves used.

[2] We began with words the designers themselves used to describe their intended effects. However, we had to modify these original terms to be meaningful to visitors, which was done through a series of pilot tests of the evaluation questions.

Figure 7. **Wordle visualization of the words visitors used to describe the *Living Liquid* area**

What questions did visitors have upon leaving?

A few visitors asked general questions about the *Living Liquid* cluster:

> Visitor2: My wife is a teacher; so, we came because she wanted ideas about how to teach.

The majority of the questions, however, pertained to individual exhibits. These questions are listed in Appendix C, according to exhibit and may be useful for their next iteration.

NEXT STEPS

The instantiation of *Living Liquid* evaluated here is the first attempt at creating an exhibit collection about marine life for the Life Sciences Gallery at the Exploratorium's new home by San Francisco Bay. As such, it serves to inform future design, development and experimentation for individual exhibits and the overall collection. Visitors' responses, especially about what they found confusing and curious about each element, I hope, can be useful in the development of the next iteration of individual exhibits. As a cluster, the study indicates that *Living Liquid* is off to a promising start as a collection about marine life that imparts an awareness of the abundance and diversity of marine microfauna.

A lot of time, thought and work went into *Living Liquid's* environmental design in its first incarnation, and this work will likely continue with its subsequent iterations. However, because the setting for the cluster will be very different and difficult to reproduce at the Exploratorium's current site in the Palace of Fine Arts, evaluation of environmental element will likely need to

take a back seat to the other challenges identified here that also merit further discussion, experimentation and evaluation. These include:

- Striking a balance in how much explanation to provide. The most frequent complaint visitors voiced about the collection was the lack of adequate information at exhibits. Not all the exhibits were designed to demonstrate or explain; some were intended to provoke curiosity and wonder. How do we balance explanation and exploration in a way that helps visitors feel that they have had an enriching and meaningful experience?
- Re-contextualizing exhibits. How do we better integrate an exhibit that was originally designed for another exhibition or collection? This issue can benefit from clearer articulation of how we want different elements to contribute individually as well as work within the larger collection.
- Fostering personal relevance. Visitors have many different ways of relating to the marine world in their lives apart from their experiences in *Living Liquid*. A better understanding of the connections that visitors already see (found in a separate front-end study on visitors' perceptions of San Francisco Bay) may help us make this collection more personally relevant.

ACKNOWLEDGEMENTS

The author would like to thank Jackie Salenger and Leah Johnson for conducting the interviews for this study and refining its questions.

APPENDIX A
INTERVIEW QUESTIONS

Questions

1. How interesting did you find that area? Would you say that was …

Not Interesting	Somewhat Not Interesting	Neutral	Somewhat Interesting	Interesting

2. What made it _____ for you?

3. How would you describe the atmosphere of this area? Would you describe this space as… [*Present back of board for scales*]

	very	somewhat	somewhat	very	
Fun		●---------●---------●---------●---------●			Boring
Depressing	very	somewhat	somewhat	very	
		●---------●---------●---------●---------●			Cheerful
Exciting	very	somewhat	somewhat	very	
		●---------●---------●---------●---------●			Relaxing
Barren	very	somewhat	somewhat	very	
		●---------●---------●---------●---------●			Lush
Polished	very	somewhat	somewhat	very	
		●---------●---------●---------●---------●			Rough
Cohesive /connected	very	somewhat	somewhat	very	
		●---------●---------●---------●---------●			Patchwork /hodge-podge

Are there any other words that come to mind for how you would describe that area?

4. In your opinion, what do you think that area is about? [*Probe*: Tell me more? *If they say 'plankton', ask* what about plankton?]

5. Was there anything you saw or found out in that area that was new to you, that you didn't know before today? [*Probe*: Tell me more?]

6. Was there anything that made you curious? that you had questions about? [*Probe for questions*]

7. Was there anything you saw or found out that was confusing? [*Probe*: Tell me more?]

8. Did you find any connections between what you saw in that area and your own life? [*Probe to exhaustion*: Anything else?]

9. Do you remember which exhibits you saw in this area? [*Show photos*] It's okay if you didn't get a chance to see them all.

   Oh and I know this wasn't really in the area, but did you by chance stop at this exhibit? [*show photo of Imaging Station with Plankton*]

10. Was there anything that you felt didn't really belong in that area? [*Probe to exhaustion*: How so? Tell me more.]

11. We'd like to give visitors like you more chances to see things under a microscope in this area. If we were to take a drop of water from the SF Bay and put it under a microscope, what do you think you'd see? Can you make a guess?

    a. Do you think you would see a lot of things? or a few things?

    b. Do you think you would see different things? or the same things?

    c. Is there anything that you've seen already in this area that makes you think so? makes you think you'll see that under a microscope?

APPENDIX B

EXHIBITS VISITORS FOUND CONFUSING

Marine Algae Vessel

Visitor9: Why the algae spins - is it just there so kids can play with it while their parents read the text?

Visitor33: What it was demonstrating was confusing.

Visitor35: I didn't know its purpose.

Visitor50: It had to do with how the air moves different shapes, but I need to read it again.

Visitor56: I didn't get it. But, I didn't take the time read it.

Visitor32: I don't quite get what's going on.

Visitor45: I didn't know what that was all about.

When Water Turns Red

Visitor11: We wanted explanation of what was in the salt.

Visitor15: What are they doing? I couldn't tell if they are eating, cleaning, or swimming.

Visitor54: the plankton in the red

Tidal Pool Tank

Visitor32: I don't see what I'm supposed to do with it. I am a hands-on person who likes to interact with the exhibits, not read.

Turbulent Orb

Visitor3: ball in the middle - I don't know what it is. It has no text.

Visitor6: about the ocean currents. I want to know why it was easier to turn it counter the way the water was going. [It] seems like it would be the opposite. Also, it needs to be labeled better, so that you know it is about currents.

Visitor19: There's no statement on that. So, I guess, "What is that liquid?"

Visitor22: I think that's what it's getting at. But, I couldn't tell.

Visitor29: I just didn't figure it out.

Visitor51: I didn't get what it was trying to do. It didn't have instructions so I couldn't tell if it was suppose to be the atmosphere or something else.

Visitor55: the blue ball - I didn't really know what it was about.

Visitor45: I thought it would reproduce the motion of the earth's ocean, but it doesn't do that. So, I was confused because I couldn't do what I thought I was supposed to do.

Nourishing Wind

Visitor12: could use more explanation on wind with water

Visitor18: Like, it was hard to understand. We didn't get it at first.

Visitor23: Just this one [*Nourishing Wind*)]

Visitor44: At first I didn't know what that was, but then I read it and learned.

Visitor45: I couldn't tell that wind was being produced.

APPENDIX C

EXHIBITS THAT PROVOKED CURIOSITY, SOMETIMES CONFUSION, AND QUESTIONS

Plankton Ballet

Visitor7: makes me curious because I see a magnifying glass.

Visitor28: Why plankton follow light?

Visitor30: Why plankton might go to the blue light?

Visitor42: The blue light …why are they attracted to the blue light?

Visitor46: It makes me want to test my water.

Visitor48: Why are plankton attracted to blue light?

Marine Algae Vessels

Visitor35: What's its purpose? It's kind of cool looking, but there's not much else.

Visitor37: We wanted to see why there were lights behind that thing, and we wanted to have magnifying glasses to see more.

Visitor44: I was curious about the green algae. I was curious when I saw it, like 'what is this all about?'

Visitor47: Like, how it works? How it separates?

Visitor50: It had to do with how the air moves different shapes, but I need to read it again.

Visitor51: What was this? How does it work? What is it trying to do?

Plankton of SF Bay

Visitor31: I came to you asking about the microscope magnification they used.

When Water Turns Red

Visitor9: curious about the plankton in the salt tank. [I] want more info.

Visitor15: What are they doing? [I] couldn't tell if they are eating, cleaning, or swimming.

Visitor11: What are creatures in salt?

Visitor17: [I] want to know where I can see it.

Visitor38: I wanted to know the name of that red compound.

Visitor39: The shrimp, what they were.

Visitor53: How long do you think it takes for salt to develop in the bacteria?

Tidal Pool Tank

Visitor32: I don't see what I'm supposed to do with it. I am a hands-on person who likes to interact with the exhibits, not read.

Visitor54: These were once plankton?

Nourishing Wind

Visitor7: I want to know what its going to do.

Visitor12: I liked what I was looking at, but it needed more explanation.

Visitor18: That. Like, it was hard to understand. We didn't get it at first.

Visitor23: It seemed more like art, more artistic than science.

Visitor29: I was surprised by that. I didn't know the quantity of the effect of the wind on the water.

Turbulent Orb

Visitor22: I like the [orb], but maybe it could explain more about earth's currents. I think that's what it's getting at. But I couldn't tell. Most exhibits have explanations, but that doesn't have an explanation.

Visitor27: It's cool how you spin it really fast, you don't see it move. But, when you stop it, the middle keeps moving fastest.

Visitor45: I thought it would reproduce the motion of the earth's ocean, but it doesn't do that.

Visitor55: I didn't really know what it was about.

Overall

Visitor2: My wife is a teacher. So, we came because she wanted ideas about hot to teach. So, I am different in that I am coming from a pedagogical perspective, as well as wanting to take pictures as well as not coming back with our kids who are now grown.

Visitor47: Everything. It all makes me curious.