AC 2012-5085: RESPONSES TO AN UNFAMILIAR THING: HOW LEARNING ABOUT A STRUCTURAL SCULPTURE CAN MAKE IT MORE APPEALING

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Responses to an Unfamiliar Thing: How Learning About a Structural Sculpture Can Make It More Appealing

Abstract

A collaboratively conceived and designed engineering teaching sculpture was recently installed at a small teaching-oriented engineering college. What began as an attempt to bring the AISC Steel Connections Teaching Sculpture to campus ultimately resulted in a unique structure that is both a place-based metaphor and a structural concept demonstration piece containing many of the connections from the original, oft-used AISC sculpture. The sculpture provides a poignant centerpiece for the civil engineering department as well as a platform for teaching structural analysis and design concepts throughout the curriculum. On the one hand it is a practical teaching tool: providing a bold introduction to heavy steel construction, serving as an effective visualization tool for teaching three dimensional vectors and forces via the various cable supports, and presenting to the students the various types of steel connections in a highly specialized setting that encourages both the visualization of and interaction with the steel connection elements. On the other hand, it contains a profound metaphor for a bioregion grappling with scarce water resources and declining environmental quality: a visual expression of consensus, of shared responsibility and balanced interests. It is a practical piece of art in a place where water is precariously held both in equilibrium and a constant state of tension.

This paper will present a study which aimed to determine whether this unique sculpture could be used to develop in aspiring engineers a combination of social, environmental, and technical curiosity. In addition to its practical and obvious teaching possibilities toward the technical, could the sculpture—which is so striking visually that one cannot help but ask questions such as "What is it?", "Why is it here?", and "What is it for?"—also be used to encourage the development of new, non-technical ideas that are social, environmental, or political in nature? To answer this question, the authors conducted a number of surveys to determine observers' views of and attitudes toward the sculpture. Participants included students of varying ranks and backgrounds, technical and otherwise. Students were initially surveyed to determine their attitudes toward the sculpture (ranking it on aesthetics, appropriateness, practical use as a teaching tool, and the possibility of gleaning deeper meaning from it). Students were then provided a short written interpretation describing both the technical teaching merits of the sculpture and the geocentric environmental metaphor. The same survey was conducted after the written interpretation to determine if an understanding of the artist's technical and philosophical vision as well as the practical teaching potential influenced attitudes toward the art. The results of these surveys, along with a detailed explanation of the sculpture's inception, design, construction, and status, are presented in this paper.

Introduction

Many of the physical objects that civil engineers produce, like bridges and roadways, serve practical purposes. Art, however, is often used to express the feelings of an artist, evoke feelings in an observer, and oftentimes is intended to serve no practical purpose. The power of the symbol is the most valuable aspect of the artist's work. On one hand, artists and engineers have a shared ambition, that of improving the human experience. On the other, their goals vary significantly, with engineers focusing on practicality and efficiency and artists revering expression above all.

These simultaneous coordinating and conflicting goals find synergy when artists and engineers work together, which was the case for a sculpture installed at a teaching-focused technical university. "Basin," a teaching sculpture, serves both the practical and the artistic realms. By its dual purpose and interpretation, it functions well on a campus with students prone to both the practical pursuits of education for gainful employment and education for worldly awareness.

Figure 1. A view of the Basin teaching sculpture from the southwest.

Basin is, at first, a very strange sight; an unfamiliar thing (Figure 1). However, with some explanation of the artist's influences, the appropriateness of the sculpture and its location on the Oregon Institute of Technology campus in Klamath Falls, Oregon becomes very clear. The riveted aluminum skin of the suspended basin form suggests an airplane's cladding but is in fact

intended to represent the patchwork of agricultural lands in the Klamath Basin, the common name of the region where Oregon Tech is located. The columns are large H-pile sections, but they have been split and welded back together to be tapered and then tilted outward to enhance the feeling of elevation or optimism; a lightening of the structure as it rises. This is based physically on material efficiency and the decreasing need for section depth to resist bending as the point of loading at the top of the column is approached. Other elements of the sculpture are inspired by the history of the timber industry in the region including stiff-leg derricks (the columns) and wooden wheels (the radial truss work that frames the basin form). The geography and geology of the area is on display in the suspended basin form itself with the oblong shape and fractured edge representing the shape of the larger Klamath Basin and the tectonic activity in the area, respectively. The fractured edge of the basin form is also symbolic of the differing views of natural resource allocation and protection espoused by members of the local community. Farmers, environmentalists, and native tribes are all stakeholders in the region's natural resources, particularly water. The Basin sculpture offers a positive view of this relationship with the diverse stakeholders represented by the columns, simultaneously supporting the basin and sharing the stewardship required to maintain it for all.

While the sculpture serves as a poignant metaphor for the region where it is placed, it is also a multifaceted teaching tool with elements of all the disciplines of civil engineering. The common steel connections used in the Steel Connections Teaching Sculpture promoted by the American Institute of Steel Construction (AISC) are included at various locations on the Basin sculpture, providing the opportunity to display bolted and welded versions of splices, shear connections, and partial or full moment resisting connections. The level of comprehension of this topic can be tailored from simple identification of connection types to more complex analysis of the existing connections to design of a more appropriate connection than the one that was used. Cables are employed to carry the weight of the suspended basin form to the supporting columns and can provide the basis for a problem in three dimensional vector statics. The suspended basin serves to catch rain and divert it into a lower basin on the ground and then into a channel to a dry well, giving the opportunity to discuss the water cycle and hydrology. The complex loading of the columns by the cables supplies a unique problem in structural analysis. Consideration of the structural loading of the entire sculpture, whether by gravity or lateral loads, can introduce concepts in load combination and factoring required for structural design.

In many cases, the artistic appeal to beauty also has an engineering benefit. In general, engineered structures that play by the laws of physics and eschew unnecessary ornament or excess are beautiful. However, by virtue of its unusual composition, Basin requires some explanation for the layperson to appreciate. The link between aesthetic and structural was most clearly exposed when the artist chose 7.5 degrees as the angle of inclination for the columns. A static analysis under dead loads showed that the moment about the base, due to the weight of the

column set at this angle, nearly perfectly offset the moment of the suspended basin form pulling the other way. Thus, many early concepts in statics are on display.

The concept of installing a steel connections teaching sculpture at Oregon Tech was inspired by Dr. Duane Ellifritt's original steel connections sculpture, which has been modified and installed on over 100 college and university campuses around the United States and abroad[4]. This sculpture was originally intended to make the three dimensional nature of steel connections more accessible to students in introductory steel design classes. Connections of beams to beams and columns in all combinations and types are implemented and are often modified any time the sculpture is recreated on a new campus. The benefits of the AISC sculpture and its effectiveness have been discussed by many researchers[3] and enhanced by others who have developed toolkits to go along with the sculpture[2] and even a virtual version of the sculpture to be used in distance education[1].

The AISC sculpture is often sponsored by a steel fabricator and installed without cost on a university campus. Some universities have used the material gathering, fabrication and installation process as a service learning opportunity[5]. And still others have developed miniature versions of the sculpture that can be wheeled into any classroom as necessary.

The faculty of the civil engineering department at Oregon Tech had been collecting pieces for the AISC steel sculpture for over five years anticipating a service learning approach when a unique opportunity presented itself. ARRA stimulus funds were made available in 2008. At the same time, the building where most civil engineering courses are taught and faculty members keep their offices was slated for asbestos abatement. With the stimulus funds available, a larger project was quickly planned that included renovation of the entire building to a LEED silver equivalent level. The cost of the project triggered a state law requiring one percent of the project budget to fund an art project. Recognizing the opportunity, the authors of this paper asked to be on the art selection committee and presented the steel connections sculpture as a possibility. Looking beyond simply steel connections, the authors wanted a more diverse civil engineering sculpture, one as functional as the AISC sculpture but with features of all of the disciplines in civil engineering. They also sought to develop a functional gathering space around the piece to avoid all of the problems they perceived with the AISC sculptures they noted in other installations. Specifically, they wanted the sculpture to exist not solely as a steel connections teaching tool placed conveniently away from social centers and used only when a steel design class was being taught; they wanted it to provide a social gathering place that would welcome anyone passing by to linger and ponder the sculpture.

In his best-selling book, Blink, Malcolm Gladwell demonstrates the importance of subconscious associations[6]. A person's prior experience with art and engineering can have a profound influence on their opinion of a piece. Thus, structural engineers and sculptural artists would

likely find Basin appealing for a variety of reasons that are immediately obvious to them. But what about laypeople who do not have such a background? Would they have strong opinions at all? Would these opinions be based on their demographic background? And could these preconceptions and subconscious impressions of the piece be manipulated or improved by a simple explanation? More specifically, if an unfamiliar thing is explained to have both a practical application and a historical connection to the place where it exists, is it more appealing to an untrained eye? How much more appealing? And a final question: can such a unique object provide a platform for opening the minds of aspiring engineers who otherwise prefer linear, step-by-step instruction?

Researchers in psychology study human perception in all manner of situations. There are many studies of human perceptions of art and of the effect of aesthetic stimuli on feelings and thoughts[7]. Few, however, have examined art that initially appears bizarre and even useless, but that after explanation has a wealth of practical, social, and historical attributes. Such is the case with the research provided here.

With the sculpture in place and varied reactions expressed and overheard, the authors developed a survey that would help to answer some of these questions and guide future teaching experiments involving the sculpture.

Methodology

The purpose of this study was two-fold: first, to determine viewers thoughts and attitudes regarding the sculpture and, second, to see if these thoughts and attitudes could be affected if the viewers learned more about the deep, underlying meanings, metaphors, and symbols represented in the sculpture.

To achieve the first objective, a survey was developed to directly measure the participants' impressions of the art. Specifically, the survey—included in its entirety in the appendix—was designed to have people rate the sculpture's attractiveness and functionality, as well as the degree to which they found it thought-provoking. Participants were also asked to rate the degree to which the sculpture influenced them to think about technical, social, and environmental issues.

To achieve the second objective, participants were given a brief but thorough summary of the sculpture's functions with specific details regarding the technical and metaphorical aspects of the art. The participants were then asked to complete a post-survey that was identical to the initial survey to determine if the information had an effect on their impressions. To simplify the process, the pre-survey, the informational summary, and the post-survey, along with some demographic questions, were all packaged into a single online assessment (please see appendix).

The entire campus community at Oregon Tech was invited to participate in the study. The university distributes a daily electronic newsletter to all faculty, staff, and students. A posting asking for participation in the study was included in the daily newsletter for one week. As an incentive, participants were told that anyone who completed the survey would be entered into a drawing to win a $50 gift card to Amazon.com. Out of approximately 120 faculty members, 120 staff members, and 2500 students, a total of 169 people completed the survey. Due to the large number of responses and the fact that the entire population was invited to participate, the sample was assumed to be representative. Once the survey was closed, one participant, a female student, was randomly selected—using the random number generator and sort functions in Microsoft Excel—to receive the promised prize.

Of the 169 people who completed the survey, 140 (83%) were students, 9 (5.3%) were faculty members, 18 (11%) were staff, and 2 (1.2%) were alumni. Most of the participants were female (64.5%). The participants were nearly evenly divided between the College of Engineering, Technology, and Management (47.3%) and the College of Health, Arts, and Sciences (52.7%). Almost all of the respondents (95%) had seen the structure in person.

Results

Initial Impressions

Responses to the pre-survey are summarized in Figure 2. These were the responses that participants gave prior to reading the information about the sculpture. Figure 2 presents a great deal of data—including response choices, frequencies, and histograms—that is discussed briefly in the following paragraphs.

One of the issues that prompted this study was a number of negative comments during the design phase by some outspoken members of the campus community about the sculpture's aesthetics. The authors wanted to know if those comments were representative. Data from the survey, however, revealed that a slight majority of the respondents initially rated it attractive. Specifically, when asked to rate the attractiveness or aesthetic appeal of the sculpture, 55% of the respondents found it to be either *somewhat* or *very attractive/appealing*, 18% felt neutral, and 27% found it to be *somewhat* or *very unattractive/unappealing.*

The respondents were evenly split when asked the degree to which they found the sculpture to be thought-provoking. Exactly 50% found it to be *extremely* or *highly thought-provoking* and 50% found it to be *somewhat* or *not at all thought provoking*.

When asked to rate the technical functionality of the sculpture, 32% thought it was *highly* or *extremely functional*, but nearly as many (23%) responded that they were *not sure how a sculpture can be functional*. The majority of the respondents (37%) rated it as *somewhat functional*.

When asked to rate the degree to which the sculpture made them think about technical issues, the responses were widespread, with a slight majority (28%) responding *somewhat*. When asked similar questions about social issues and environmental issues, most people (42% and 32% respectively) responded that the structure did *not at all* make them think about these issues.

Survey Group	Degree of Preparation	Count	Percent
Attractive	Very Attractive	**33**	**19%**
	Somewhat Attractive	**63**	**36%**
	Neutral	**31**	**18%**
	Somewhat Unattractive	**31**	**18%**
	Very Unnattractive	**16**	**9%**
Thought-Provoking	Extremely Thought-Provoking	**26**	**15%**
	Highly Thought-Provoking	**61**	**35%**
	Somewhat Thought-Provoking	**66**	**38%**
	Not at All Thought-Provoking	**21**	**12%**
Technically Functional	Extremely Functional	**14**	**8%**
	Highly Function	**41**	**24%**
	Somewhat Functional	**65**	**37%**
	Not at All Functional	**14**	**8%**
	Unsure How to Rate	**40**	**23%**
Promotes Thoughts About **Technical Issues**	A Great Deal	**29**	**17%**
	Quite a Bit	**40**	**23%**
	Somewhat	**48**	**28%**
	Very Little	**28**	**16%**
	Not at All	**29**	**17%**
Promotes Thoughts About **Social Issues**	A Great Deal	**7**	**4%**
	Quite a Bit	**13**	**7%**
	Somewhat	**25**	**14%**
	Very Little	**56**	**32%**
	Not at All	**73**	**42%**
Promotes Thoughts About **Environmental Issues**	A Great Deal	**11**	**6%**
	Quite a Bit	**33**	**19%**
	Somewhat	**39**	**22%**
	Very Little	**36**	**21%**
	Not at All	**55**	**32%**

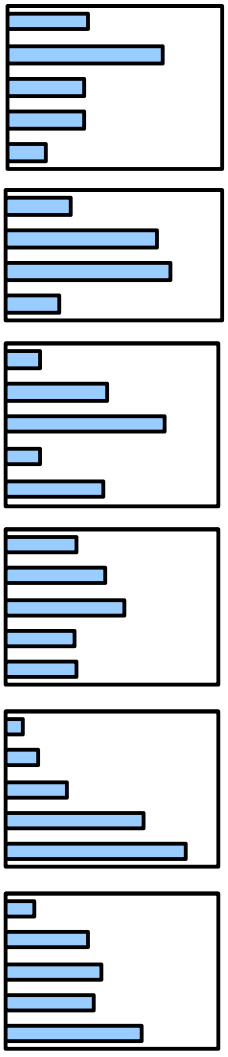


Figure 2. Summary of initial impressions.

In summary, while half or more of the respondents found it to be at least somewhat attractive, functional, and thought-provoking, most of the participants found it to be more reflective of technical issues than social or environmental issues. The researchers hypothesized that this would change once they were presented with the background information on the sculpture.

Final Impressions

After completing the pre-survey, respondents were given a one-half page explanation summarizing the social, environmental, and technical underpinnings of the sculpture. They were then asked to complete the post-survey, which was identical to the pre-survey. The figures below show the distribution of responses for each survey question before and after reading the explanatory information.

After reading the information, participants were once again asked to rate the attractiveness or aesthetic appeal of the sculpture. Figure 3 summarizes the responses both before and after the reading. Notice that after reading the information, the number of *very attractive* and the *somewhat attractive* responses increased, while the number of responses in each of the other categories went down. Specifically, 46 respondents increased their attractiveness rating while 14 respondents decreased their ratings. Using the Wilcoxon Signed Rank Test, this represented a significant increase in attractiveness ratings ($Z = 3.887$, $p < 0.01$).

Rating Level	Before	After	Before After	Difference	Difference
Very Attractive	33	40		7	
Somewhat Attractive	63	72		9	
Neutral	31	27		-4	
Somewhat Unattractive	31	22		-9	
Very Unattractive	16	12		-4	

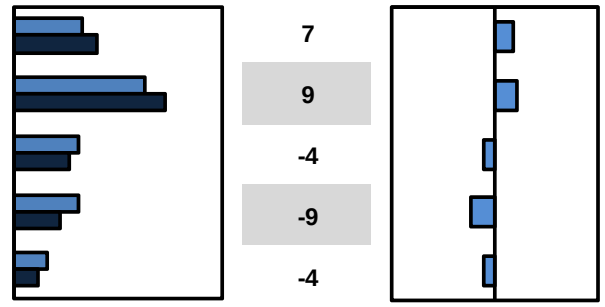


Figure 3. Pre- and post-survey responses for attractiveness ratings.

When the data are broken out by gender, the results differ drastically: after reading the information, 8 males increased their rating and 7 males decreased their rating suggesting no significant difference ($Z = 0.876$, $p = 0.381$) in attractiveness. Females, on the other hand, significantly increased ($Z = 3.842$, $p < 0.01$) their ratings of the sculpture's attractiveness after learning more about it: specifically, 37 increased their ratings while 7 decreased. Also, those that responded as being *very* or *extremely familiar* with the information, did not significantly increase their attractiveness ratings ($Z = 1.767$, $p = 0.077$), nor was there any significant difference ($Z = 0.905$, $p = 0.366$) in attractiveness rating for those that reported being *somewhat familiar* with the sculpture's background. People who reported being *not at all familiar* with the information represented the group with the biggest increase in attractiveness ratings, with 31 of them increasing their ranking and 5 decreasing their ranking: a significant improvement ($Z = 4.093$, $p < 0.01$)

The degree to which respondents found the sculpture thought-provoking was also compared before and after the interpretation. Response distributions for both surveys are shown in Figure 4.

After reading the information, 54 people increased their ratings while 17 decreased their ratings, representing a significant increase ($Z = 4.091$, $p < 0.01$) in how thought-provoking the respondents found the sculpture after learning more about it. Men did not find it more thought provoking ($Z = 1.955$, $p = 0.51$) but women did ($Z = 3.522$, $p < 0.01$). Only those who were *very* or *extremely familiar* with the sculpture did not find it more thought-provoking after reading about it ($Z = 1.072$, $p = 0.284$).

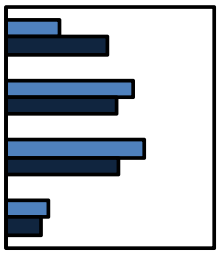
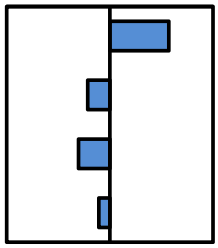
Rating Level	Before	After	Before / After	Difference	Difference
Extremely Thought-Provoking	26	49		23	
Highly Thought-Provoking	61	53		-8	
Somewhat Thought-Provoking	66	54		-12	
Not at All Thought-Provoking	21	17		-4	

Figure 4. Pre- and post-survey response frequencies for thought-provoking ratings.

Comparisons were made between the respondents' ratings of the sculpture's technical functionality also before and after reading the explanatory information. These responses are summarized in Figure 5. Eighty-nine people increased their functionality rating after reading the information while 10 decreased their rating. Thus, the participants found the sculpture to be significantly more functional ($Z = 7.893$, $p < 0.01$) after reading more about it. These results did not change when compared by gender or familiarity with the sculpture.

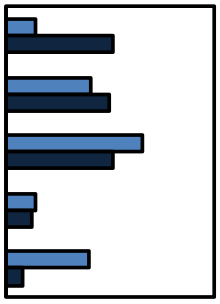
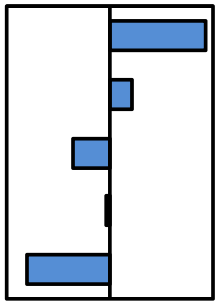
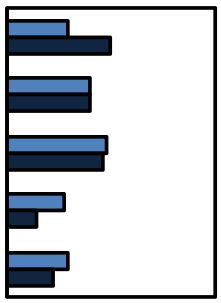
Rating Level	Before	After	Before / After	Difference	Difference
Extremely Functional	14	51		37	
Highly Function	41	50		9	
Somewhat Functional	65	51		-14	
Not at All Functional	14	13		-1	
Unsure How to Rate	40	8		-32	

Figure 5. Pre- and post-survey response frequencies for functionality ratings.

Respondents were asked to rate the degree to which the sculpture made them think about technical issues. The responses, summarized in Figure 6, reveal a shift in the ratings after the participants had read the information. Specifically, 62 people provided more positive ratings in the post-survey and 14 people decreased their ratings. This resulted in a significant increase ($Z = 5.182$, $p < 0.01$) in the degree to which the structure influenced thoughts on technical issues. Interestingly, female respondents made up the majority of this significant change in opinion ($Z = 5.108$, $p < 0.01$) whereas men, who already found the structure to be technically thought-

provoking, did not significantly change their opinions (Z = 0.959, p = 0.337) after the explanation.

Rating Level	Before	After	Difference
A Great Deal	29	50	21
Quite a Bit	40	40	0
Somewhat	48	46	-2
Very Little	28	14	-14
Not at All	29	22	-7



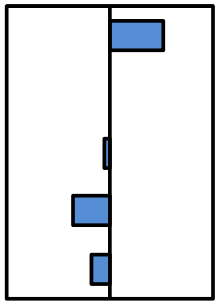
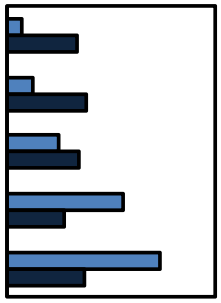


Figure 6. Pre- and post-survey response frequencies for degree to which the sculpture promotes thoughts about technical issues.

The participants were also asked to rate the degree to which the sculpture made them think about social issues. The distributions pictured in Figure 7 reveal the study's most significant positive shift in impressions (Z = 8.498, p < 0.01). Ninety-nine of the respondents (nearly 60%) provided more positive ratings after learning more while only four participants decreased their ratings. This suggests that most people had no notion of the social metaphor behind the sculpture until it was explained to them.

Rating Level	Before	After	Difference
A Great Deal	7	34	27
Quite a Bit	13	38	25
Somewhat	25	35	10
Very Little	56	28	-28
Not at All	73	37	-36



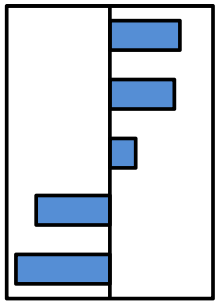


Figure 7. Pre- and post-survey response frequencies for degree to which the sculpture promotes thoughts about socials issues.

Finally, participants were asked to rate the degree to which the sculpture made them think about environmental issues. The distributions in Figure 8 reveal that prior to the explanation, many viewers did not associate the structure with environmental issues prior to reading the information. Learning more about the structure influenced 87 respondents (over 50%) to provide more positive ratings on the post-survey and 10 respondents to provide more negative responses. This shift toward a greater degree of thought about environmental issues was statistically significant (Z = 7.308, p < 0.01).

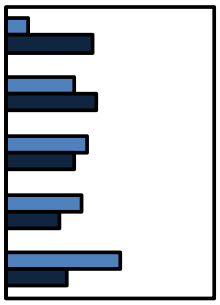
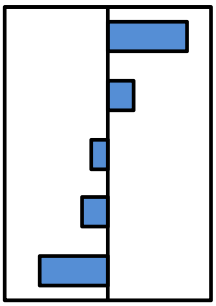
Rating Level	Before	After	Before After	Difference	Difference
A Great Deal	11	42		31	
Quite a Bit	33	43		10	
Somewhat	39	33		-6	
Very Little	36	26		-10	
Not at All	55	29		-26	

Figure 8. Pre- and post-survey response frequencies for degree to which the sculpture promotes thoughts about environmental issues.

Findings

Providing people with background information on the design of the sculpture resulted in significantly more positive attitudes regarding the structure. Specifically, this research revealed that people who spent the time to learn more about the sculpture and what it represented found it to be

- More attractive
- More thought-provoking
- More technically functional
- More likely to make them think about technical issues
- More likely to make them think about social issues
- More likely to make them think about environmental issues

When the responses were broken out according to gender, the data revealed that men did not change their opinions regarding the attractiveness nor the degree to which the structure made them think about technical issues—suggesting that they already found the structure to be attractive and technically thought-provoking.

Finally, those who were at least somewhat familiar with the sculpture's metaphor did not find it any more attractive or thought-provoking after learning more about it. This suggests that, to at least some degree, they had already received some of the information presented in the intervention and formed their opinions prior to participating in the study.

Conclusion

A visually striking and technically functional piece of art with an extensive, place-based, metaphorically influenced design was recently installed on the Oregon Tech campus, in Klamath Falls, Oregon. Many in the campus community were curious about what it was, why it was here,

and why it looked the way it did. This study set out to not only educate people about the structure, but to see if that education would influence their impressions. The results of this survey suggest that knowing more about the structure did in fact make it more appealing in a number of ways.

In the future, the researchers are interested in using various aspects of the sculpture in a number of different courses to determine if the sculpture, as a learning tool, can not only improve the degree to which people think about technical, social, and environmental issues, but the degree to which they can actually learn more about these issues.

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Appendix

Attached is a copy of the online survey used in this study. While not shown here, a picture of the sculpture (Figure 1) was included on each page so that the respondents could look at the sculpture while answering the questions.

An Unfamiliar Thing

This survey is part of a research project studying perceptions of the sculpture that was recently placed on the Klamath Falls campus of OIT. This sculpture was purchased through Oregon's "One Percent for Art" project. The purpose of this survey is to determine individual thoughts and feelings regarding the sculpture. Completion of the survey is voluntary and will take approximately 10 minutes. Those who complete the survey will be eligible for a $50 amazon.com gift card. Please complete the survey by Tuesday, December 6 to be eligible for the drawing.

The information you share will be completely confidential and will be used in aggregate in a research report summarizing the results. Your name, of course, will never be reported with your individual answers. Thank you for your time and support.

An Unfamiliar Thing

1. The sculpture in the photograph above was recently installed outside of the south-side entrance of Owens Hall on the OIT campus in Klamath Falls. Have you seen this sculpture in person?

- Yes
- No

An Unfamiliar Thing

For the remainder of this survey, please answer the questions based upon the photograph alone.

2. What were/are your first impressions of the sculpture?

3. Please rate the attractiveness or aesthetic appeal of the sculpture.

4. To what degree do you find the sculpture thought-provoking?

5. Please rate the technical functionality of the sculpture.

6. Is the outdoor space created by the sculpture conducive to the following activities (check all that apply)?

- [ ] Relaxing alone
- [ ] Studying alone
- [ ] Meeting casually with friends
- [ ] Meeting with classmates to study
- [ ] Giving or receiving course-related instruction

7. To what degree does the sculpture make you think about...

	A great deal	Quite a bit	Somewhat	Very little	Not at all
Environmental issues?	○	○	○	○	○
Social issues?	○	○	○	○	○
Technical issues?	○	○	○	○	○

8. For which of the following locations do you think that the placement of the sculpture is appropriate (check all that apply)?

- [ ] On the OIT campus
- [ ] In the City of Klamath Falls
- [ ] In the Klamath Basin
- [ ] In Klamath County

An Unfamiliar Thing

Please take a few moments to read the information below and learn more about the sculpture and the inspiration for its design and construction.

'BASIN: A Steel Connections Teaching Sculpture' has essentially two functions:

One of its functions is as a technical teaching tool for engineers. In order to facilitate the teaching of structural steel connection design—a topic that students often struggle with—the sculpture incorporates 24 different types of steel connections that students can look at, touch, and in some cases, even dissemble and reassemble. As such, it is an invaluable tool for improving the instruction of hundreds of civil engineering students on campus. It can also be used to facilitate instruction in engineering mechanics, structural analysis, steel member design, and concrete foundation design.

The sculpture's other function is to serve as a place-based, artistic metaphor for the Klamath Basin. The sculpture includes a suspended basin which is roughly the same shape as—and thus representative of—the Klamath Basin. This suspended form is covered in a patchwork of aluminum plates representing the rural community's patchwork of farms and land and the heavily engineered nature of the Klamath River watershed. The basin has a fracture in it, symbolic of the sometimes combative and opposing nature of the people and politics of the Klamath Basin as well as representing the volcanic history of the area that fractured the geography and formed the surface of the surrounding earth. As with the Klamath Basin that it represents, the suspended basin serves to collect and distribute water downward—or downstream. Water, and who owns the rights to it, has been a contentious issue in the Klamath Basin to the extent that it has even made headlines in National Geographic magazine and other major forums. Historically, conflicts over water have taken place between native tribes, farmers and ranchers, and environmentalists who wish to protect the wildlife that depend upon the water. These three powerful influences are represented by the three structural steel columns that both hold the basin—and by transference the water—aloft and in tension. Each of these columns is pulling the water in its direction, and yet each column is necessary to keep the water from being lost altogether. In terms of equilibrium, the columns—or powerfully interested parties—both support the basin and depend upon it for stability. Numerous other representations such as wagon wheels and logging derricks can be found in the sculpture, revealing the region's past with a look toward the future.

Ultimately, the entire structure is a metaphor for the delicate balance of the area's natural resources.

9. How familiar were you with the information above prior to reading it?

10. What are your impressions of the sculpture now, after learning more about it?

An Unfamiliar Thing

Please answer these questions again based upon the new information you have learned about the sculpture.

11. Please rate the attractiveness or aesthetic appeal of the sculpture.

12. To what degree do you find the sculpture thought-provoking?

13. Please rate the technical functionality of the sculpture.

14. Is the outdoor space created by the sculpture conducive to the following activities (check all that apply)?

- [ ] Relaxing alone
- [ ] Studying alone
- [ ] Meeting casually with friends
- [ ] Meeting with classmates to study
- [ ] Giving or receiving course-related instruction

15. To what degree does the sculpture make you think about...

	A great deal	Quite a bit	Somewhat	Very little	Not at all
Environmental issues?	○	○	○	○	○
Social issues?	○	○	○	○	○
Technical issues?	○	○	○	○	○

16. For which of the following locations do you think that the placement of the sculpture is appropriate (check all that apply)?

- [ ] On the OIT campus
- [ ] In the City of Klamath Falls
- [ ] In the Klamath Basin
- [ ] In Klamath County

An Unfamiliar Thing

Demographic Information

Please provide the following information to become eligible for the $50 amazon.com gift certificate.

17. Name:

18. Email:

19. Gender:

Please identify

20. OIT Affiliation:

Please specify

21. If you are a faculty member or a student, with which department are you most closely affiliated?

22. How long have you been at OIT?

23. How long have you lived in the Klamath Basin?