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Semiotic Analysis of a Science Library: Inclusion and Messaging

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Purpose

The purpose of this study is to investigate what semiotic analysis can reveal about how welcoming and inclusive a science library space is for patrons.

A science library space was examined in terms of its messaging to patrons of various genders, abilities, races, ethnicities, nationalities, and disciplines.

Findings are presented about the space's messaging regarding the disciplines it serves, inclusion of patrons from minoritized demographic groups, and general expectations of visitors.

Methods

Semiotic analysis examines the meanings that individuals interpret places as having. It involves the study of objects, which can range from images and words to physical items, and their meanings as individual interpreters understand them (Hall, 1997).

The lack of racial and gender diversity in STEM is a persistent challenge despite the growth in the number of STEM jobs and STEM degrees earned (Pew, 2021).

We examined which behaviors are encouraged and discouraged, whether the space promotes scientific disciplines to its visitors, and how diverse groups of patrons might interpret elements in the space. This includes how well the space promotes science programming, science collections, and science learning.

Findings

Based on our semiotic analysis, the Science and Engineering Library's passive communication to its patrons succeeds more in promoting science and encouraging desired behavior (or discouraging undesired behavior) than in promoting diversity and inclusion.

Behavioral Expectations

The main entrance to the Science and Engineering Library (Figure 1) is made of glass so that patrons can see inside, however, thick vertical bars and wired glass punctuate the windows and door. Immediately inside, there are ropes and theft detectors around the doors. This creates a feeling of suspicion or surveillance. Exhibits are displayed behind glass, which makes them less inviting and interactive.

Findings



Figure 1 – Entrance with industrial aesthetic

Science

There are posters celebrating modern achievements of women scientists of diverse backgrounds (Figure 2). These represent an assortment of scientific disciplines, including biology, chemistry, public health, aeronautics, computer science, and astronomy. They send a message of inclusivity to female patrons of various ethnicities and abilities.

There is a nature theme to some of the furnishings throughout the library. For example, there are leaf patterns on armchairs and wood stump coffee tables. There is a yellow-green color used in accents. There are decorative plants. This theme connects to the science orientation of the library. The vibrancy of these spaces and elements contrast with the more utilitarian decoration of the majority of the library space, which does not effectively encourage scientific inquiry.



Figure 2 – Posters celebrating diverse women scientists

Findings

Diversity, Equity, and Inclusion

The signs for the elevator are not very visible. This diminishes accessibility for patrons who have challenges with mobility. Some signs, such as the elevator sign, have only text and not pictograms. On a positive note, the parking area provides ADA accessibility. Footstools are provided for patrons of different heights to reach the stacks. Several signs in the library do not have braille signs for patrons with vision impairments.

The restrooms throughout the Science and Engineering Library are binary and the nearest gender-inclusive restroom is inconveniently far from the library, however, it is helpful that the library offers directions to a gender inclusive restroom in the building.

Posters on the third floor display diverse scientists (Figure 2). These include women, Muslims, scientists with disabilities, Black scientists, Asian scientists, and Latina scientists. Though they are clearly celebrating diversity, these posters are located deep inside the library and are not visible to patrons who come in to pick up materials or use the public access computers. Though the library includes signage and messaging that celebrates diverse populations, it is overwhelmed by the signage for behavioral expectations (See Figure 3).

The industrial, minimalist look of fluorescent lighting, dropped ceilings, and metal fixtures is a euro-centric style, which may not be welcoming to students from other backgrounds. Efforts have been made to add color and interest in some areas around the library, but the majority of the library space does not appear intentionally designed to welcome patrons.



Figure 3 – Prescriptive signage

Implications

The semiotic analysis method enables librarians to gauge the inclusiveness of a space without burdening patrons with participation in research.

Behavioral messaging in libraries should make patrons feel welcome. Library signage that precludes activities frequently performed by patrons should be accompanied by library signage that directs patrons where they may participate in these activities without disturbing other patrons. This will balance the prescriptive, negative messaging in libraries with positive, inviting messaging. Libraries should consider their priorities in terms of safety versus a feeling of surveillance for patrons when designing study spaces. While glass can help library staff monitor activity in the library, glass walls can also lead to a lack of privacy and a feeling of distrust. Likewise, libraries must make decisions between the security of their materials provided by wired glass and theft detectors versus a more welcoming atmosphere of trust.

Dedicated subject libraries should promote their content with visual cues. A science library should be updated with modern, clean, furnishings in good condition to show respect for its patrons and their work. A science library should not have a predominance of science items from any particular science discipline it serves, but provide appealing displays from a variety of disciplines representing both the history of science and modern advances. Educational disciplinary displays can incorporate diverse scientists to promote the inclusion of diverse patrons.

In keeping with universal design, libraries should provide clear and visible signage for the library itself, as well as its elevators, exits, restrooms, quiet study spaces, group study spaces, and browsable stacks. Libraries should provide gender inclusive restrooms and clearly marked spaces for religious reflection. Libraries can make an effort to choose inclusive art and display artifacts to appeal to patrons from a variety of backgrounds.

References

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