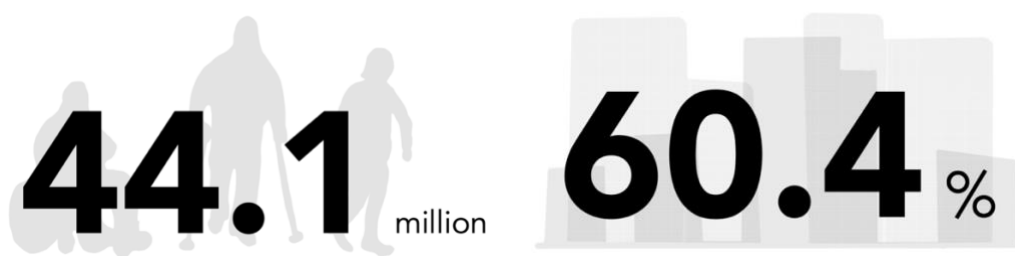


Luka Harb

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The Disability Movement History and the Important Role of Architecture and Design

Over 44 million people in the US were documented as disabled in 2022. In a survey done in the U.S., 60.4% of respondents had difficulty getting into their place of work. Numbers like this should be at the forefront of our decision-making and problem-solving.



Although these statistics are documented, they are often ignored or begrudgingly acknowledged in architecture and in the spaces where we live and work. Universal design is a relatively recent concept that emphasizes designing for the needs and abilities of all users. Many of the ideas in modern universal design come from the disability movement and its long history. Looking back at history is important to contextualize the choices we now make in such an integral field as architecture.

Definitions:

Disability

“Disability is part of being human. An estimated 13 billion people—about 16% of the global population—currently experience significant disability. This number is increasing due in part to population ageing and an increase in the prevalence of noncommunicable diseases.

Disability results from the interaction between individuals with a health condition, such as cerebral palsy, Down syndrome, and depression, with personal and environmental factors including negative attitudes, inaccessible transportation and public buildings, and limited social support.”

Accessibility

This definition by the U.S. Department of Education’s Office of Civil Rights explains accessibility: “Accessibility means a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use.”

It is important to note that accessibility should be framed with equity. In many cases, equality is used synonymously with equity. This ignores the different levels of ability that individuals have and their capability to access things that others may easily be able to.

Universal Design

From the Disability Act 2005, at the United Nations Convention on the Rights of Persons with Disabilities, universal design is defined as:

“The design of products, environments, programs, and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. ‘Universal design’ shall not exclude assistive devices for particular groups of persons with disabilities where this is needed.”

Disability History Timeline

1815-1817

Formal Deaf Education Begins in the U.S.

Thomas H. Gallaudet founded the Connecticut Asylum for the Education and Instruction of Deaf and Dumb Persons in Hartford, Connecticut. This is the first school of this kind in America and paved the way for later innovations in “deaf space”.

1829

Braille Invents the Raised Point Alphabet

Louis Braille invented the raised point alphabet. Unfortunately, this method was not adopted in the rest of the U.S. until the 1860’s and was not codified in architecture until the 1990’s. Now it is a part of ADA (American Disability Association)

- Specifications:
- High contrast colors (light lettering on dark background or vice versa).
- Tactile lettering using sans-serif font.
- Braille must be 48 inches off the ground.
- Tactile lettering must be 60 inches above the ground.
- Braille dots must be domed or rounded
- Horizontal spacing between dots (minimum 0.1 inches, vertical min. 0.2 inches)
- First violation penalty up to \$75,000
- Required for all permanent signage (restrooms, exits, room numbers)

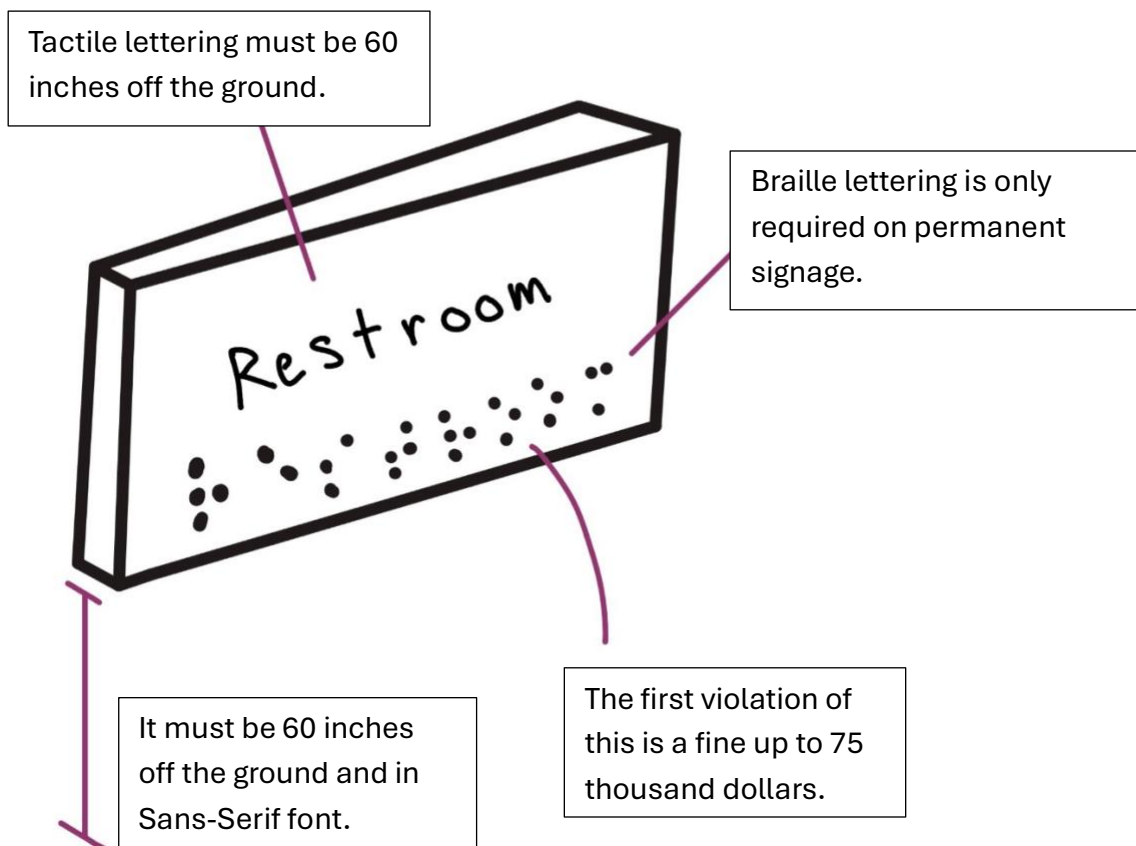


Image 1: A drawing of a restroom sign with braille beneath it. Lines point to parts of the sign explaining the architectural code required for braille.

1950

Beginning of National Barrier-Free Standards

After World War II, disabled veterans and people with disabilities began the barrier-free movement. Through combined pressure, the Veterans Administration, the President's

Committee on Employment of the Handicapped, and the National Easter Seals Society began the shift towards barrier free standards being put in place around the country.

1968

The Architectural Barriers Act of 1968

This act mandates the removal of the obstacle of the physical design of the buildings and facilities. The act requires that all buildings designed, constructed, altered, or leased with federal funds be made accessible.

1970

Educator Judy Heumann denied teaching license, sues the New York City Board of Education

Educator Judy Heumann sued the New York City Board of Education when her application for a teaching license was denied. The reason is the same one that was used to deny her admission to kindergarten: her wheelchair is a fire hazard. The suit, settled out of court, launched Heumann's career of activism. Heumann later served in the Clinton Administration as Assistant Secretary of the Office of Special Education and Rehabilitation Services at the US Department of Education from 1993 to 2001.

The Education for Handicapped Children Act

The Education for Handicapped Children Act of 1975 was signed into law. This was later reauthorized as the Individuals with Disabilities Education Act (IDEA). The Act guarantees a free, appropriate, public education for all children with disabilities in the least restrictive environment.

1990

Capitol Crawl Protest

On March 12, 1990, disability rights activists arrived at the U.S. Capitol and demanded that the Americans with Disabilities Act (ADA) be passed. Over 1,000 protesters protested the delay in passing the ADA Act. After a day of rallies and speeches, over 60 activists abandoned their wheelchairs and mobility devices and began crawling the 83 steps up to the U.S. Capitol Building. The "Capitol Crawl" becomes instrumental in the passage of the ADA.

The Americans with Disabilities Act (ADA) is signed into law.

President George H.W. Bush signed legislation prohibiting the discrimination of people with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the public. The ADA gives civil rights protections to individuals with disabilities, like those provided to individuals based on race, color, sex,

national origin, age, and religion. This act ranges from protecting employees to telecommunications companies being required to provide accessible services.

The Present and What's Next

2005

Deaf Space is used intentionally in architecture for the first time

Commissioned by Gallaudet University, Hansel Bauman creates spaces that are built for people who are deaf and hard of hearing. These follow 6 main principles: sense reach, space and proximity of persons, mobility and proximity in a space, light and color, and acoustics. All these principles are meant to make communication, inhabitation, and interaction with a space as easy and enjoyable as possible. Rather than pointed edges, rounded ones are preferred to keep sight lines clear. More open space is made to ensure people signing have enough room to move. Colors that are high contrast and brightly lit rooms serve to make perceiving surroundings easier. Soundproof walls ensure people using cochlear implants or those who have ear sensitivities can learn and live without discomfort and distraction.

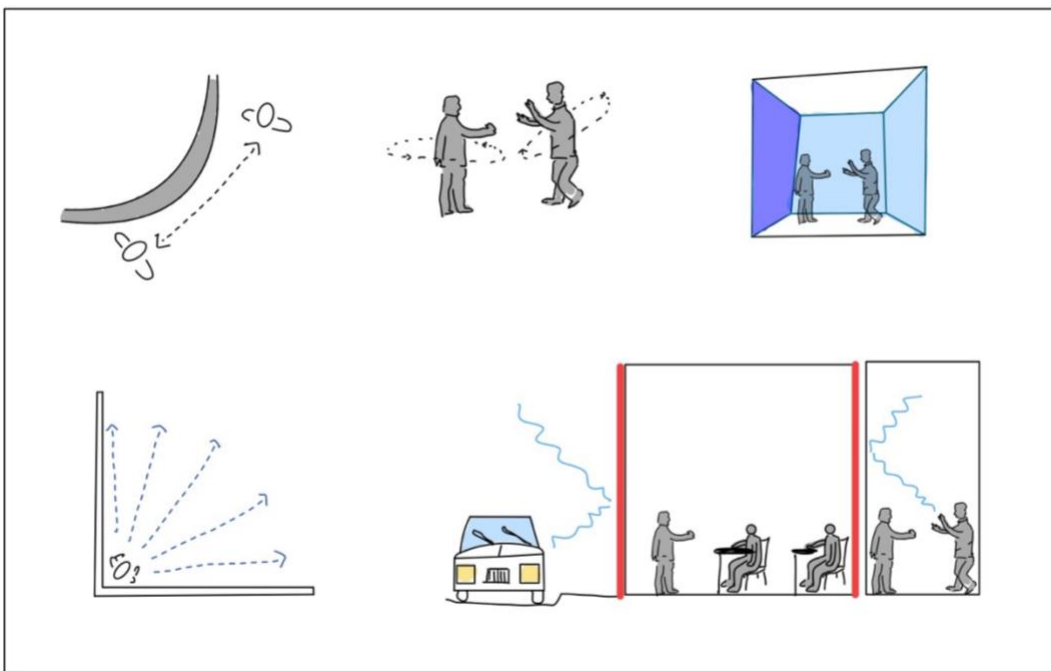
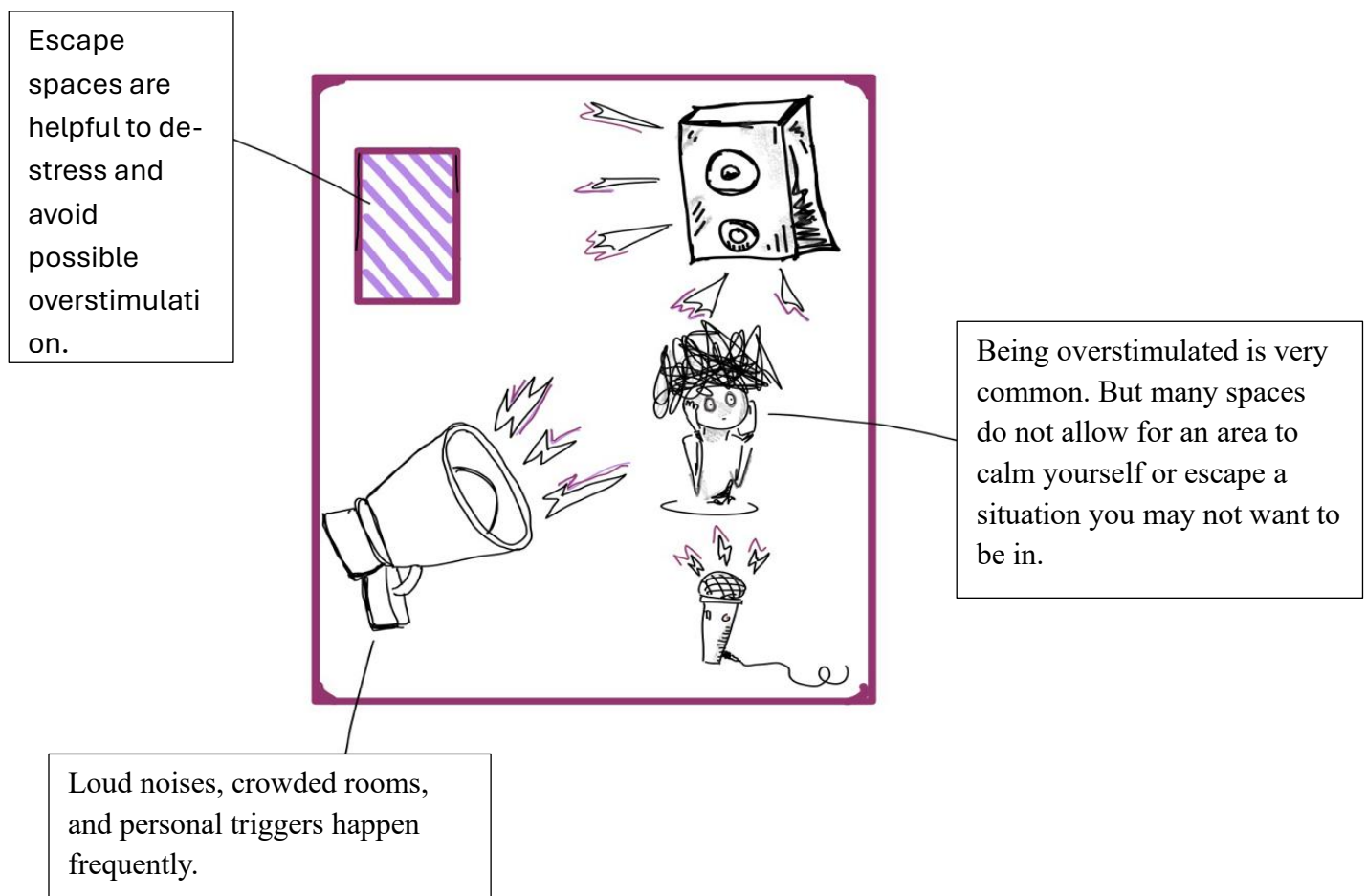


Image 2: An informational diagram highlighting the 6 principles of building a “deaf space.” These include sense reach, space and proximity of persons, mobility and proximity, light and color, and acoustics. These are intentional design aspects that make a space more accessible and enjoyable.

2013

Magda Mostafa creates her own accessible architectural code

In 2013, an architectural code designed specifically for people with autism was published by Egyptian Canadian architect Magda Mostafa. This is the first and only example of a specific, in-depth code being made for people with autism. Her goal with this was to use architecture to give people with disabilities independence to interact and move within her spaces.



As the code and expectations for a new building change to encompass everyone's needs, living will become more enjoyable for everyone. Universal design is directly

correlated with ease of living, so there is no reason not to study and implement this in more than just architecture. It should be taught in schools, schools should be built following its principles, and it should be taught to be understanding of those who have different needs than you. In architecture, designing for people with disabilities can and should be seen as the first step, not an afterthought when inspectors come knocking on your door. Society has deemed it acceptable to design and think for less, not more. This notion is unempathetic and makes everyone's life harder. History shows how far we have come and how much further we can still go in terms of design and accessibility.

References

American Bar Association, Commission on Disability Rights. (n.d.). *Timeline of disability rights in the United States*. American Bar Association. https://www.americanbar.org/groups/diversity/disabilityrights/about_us/timeline/

Bush, G. (1990, July 26). *Statement by the President: Americans with Disabilities Act of 1990*. The White House / U.S. National Archives and Records Administration. <https://www.archives.gov/research/americans-with-disabilities/transcriptions/naid-6037493-statement-by-the-president-americans-with-disabilities-act-of-1990.html>

Centre for Excellence in Universal Design. (n.d.). *About universal design*. National Disability Authority. <https://universaldesign.ie/about-universal-design>

Elliott, A. (2022, March 29). *Capitol Crawl to access for all*. Los Angeles County Department of Mental Health. <https://dmh.lacounty.gov/blog/2022/03/capitol-crawl-to-access-for-all/>

Excelsior Marking. (2017, May 14). *ADA/Braille sign guidelines*. Excelsior Marking. <https://www.excelsiormarking.com/ada-braille-sign-guidelines>

Gallaudet University. (n.d.). *Deaf Space*. Campus Design and Planning, Gallaudet University. <https://gallaudet.edu/campus-design-facilities/campus-design-and-planning/deafspace/>

Mostafa, M. (n.d.). *Architecture for Autism: The ASPECTSS Design Index*. <https://www.autism.archi>

U.S. Department of Justice, Civil Rights Division. (n.d.). *Americans with Disabilities Act of 1990, as amended*. ADA.gov. <https://www.ada.gov/law-and-regs/ada/>

[Video]. (n.d.). *[How architecture changes for the deaf]*. YouTube. <https://www.youtube.com/watch?v=FNGp1aviGvE>