

“Let’s Build a Library!” or How Accessibility is Left Behind in Our Problem-Solving Framework

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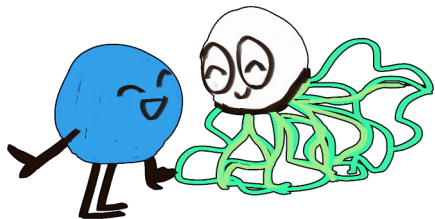
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Hanin Eisa studied Computer Games Art at Anglia Ruskin University in Cambridge (UK) focusing on Character Design. After participating in the “Outlines of absence, contours of presence” exhibition, her interests shifted towards creating projects of kindness and care with a playful, disarming elements.



Protoni and Meshi

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Abstract

The *Curb Cut Effect*, named after Michael Pachovas's intervention of pouring cement to create slopes in Berkeley, California in the 1970s, refers to the phenomena in which accommodations that work for people that need them are appreciated by other groups of people in society. In living in a society, we create structures and systems that facilitate the participation of people, which includes special accommodation needs. The library is a pocket of society, housing heritage, information, and services open and accessible to the public, and has many aspects related to creating a library for the public. That being said, there is a gap in this problem-solving framework, one which leads to exclusion of people. This gap creates a vicious cycle in which exclusion is addressed later, and then returning to this problem-solving framework where the gap still exists,

which leads to exclusion being addressed later, and it repeats. This thesis aims to name this cycle of exclusion by looking at how the public views libraries in their minds and their accessibility by gathering public opinion using a doll house that illustrates the current outcome of this framework that we use, and a research-based approach that dives into possible learning opportunities of accessibility, the mindset related to the access and exclusion of people, and what designing for the people looks like. It concludes that there are opportunities in learning about accessibility from the perspective of the public, but whether these opportunities are taken is ambiguous, both due to awareness and transparency of the process.

Table of Contents

Introduction.....	8
The State of Accessibility	13
Physical Space	13
Information Space	28
Head Space.....	44
Using a Toy as a Research Tool.....	47
Accessible Dissonance	48
Data Gathering	50
Cardboard Prototype	51
Wooden Prototype.....	62
Graupappe Prototype	69
Results	84
Discussion	89
Limitations	93
Summary	96
Naming the Name: The Cycle of Exclusion	97
Disintegration by Design and Politics	98
The Sustainability of Personal Hindsight.....	138
Design for the People	174
Conclusion.....	205
Bibliography.....	208

Introduction

My interest in Accessibility did not start at Libraries. It actually started with my interest in Video Games Design and Virtual Reality (VR) videos of disabled people chatting in VRChat and talking about their experiences of their disabilities. Mark Brown's Game Maker's Toolkit video series *Designing for Disability* really brought to light how I too benefited from the accessibility options that came with Video Games.¹ While they centred around designing for disabilities ranging from visual to cognitive specifically and the best practices, he and the comment section mentioned the various overlaps of these options with an able-bodied person. I noticed how the default experience of playing a video game or watching someone else play always had subtitles as a default. To be fair, I

¹ *Making Games Better For...*, Designing for Disability, 2018, https://www.youtube.com/playlist?list=PLc38fcMFcV_vvWOHMDriBIVocTZ8mKQzR.

watched a lot of Anime with English subtitles, which primed me more for subtitles, and this series has explained how I approached and interacted with my media: I cannot watch media without subtitles even if I understand the language; if flashing lights is something that I can turn off, I will; and I will adjust the sensitivity of my controllers.

YouTube channels such as *Syrmor* and *Leeroy will's wissen!* (Leeroy wants to know) that showcase a variety of single stories featuring people from different walks of life, including disabled people, disability YouTubers like Jessica Kellgren-Fozard² and Jessica from *How To ADHD*³, and information that is consolidated such as *Can I Play That?*⁴ and *Disabled World*⁵, were how I got interested in the subject. *Syrmor*'s videos take place largely in a first-person perspective VR-Chat, and everyone in VR-Chat uses avatars. In one, *Syrmor* from *Syrmor* interviews a boy represented by Piglet about his condition called Epidermolysis bullosa, which he nicknamed *the butterfly condition*. He explained the management of his condition, how he was treated in school, and his hobby as a streamer. He mentioned having a video feed of his hands on the keyboard and

² *What Hawkeye Gets Right about Deafness*, 2022, <https://www.youtube.com/watch?v=LPNixPagHEA>.

³ 'How to ADHD - YouTube', accessed 24 January 2022, <https://www.youtube.com/>.

⁴ 'Can I Play That?', *Can I Play That?*, accessed 30 October 2021, <https://caniplaythat.com/>.

⁵ *Disabled World*, 'Disability Statistics: Information, Charts, Graphs and Tables', *Disabled World*, 9 February 2019, <https://www.disabled-world.com/disability/statistics/>.

mouse as proof of his condition and his play.⁶ The Syrmor videos come with subtitles embedded in videos.

On *Leeroy will's wissen*, he does more formal interview-like videos, while also displaying empathy around the stories of his guests and emphasizing that the views are of the guests themselves. He himself is a disabled person, specifically juvenile osteoporosis, and uses a wheelchair. He has had interviews with various disabled people, some with common disabilities such as blindness and deafness, some by circumstance such as Long Covid, and some who have a rare disease. They all have subtitles that you can enable.⁷

Through this, I became familiar with disability and accessibility from a so far able-bodied perspective. This also came with developing an eye for accessibility and inaccessibility in my own environment. To me, accessibility became something that seemed obviously beneficial to everyone, yet is invisible. When services or places are inaccessible, the immediate question is “How

⁶ *Living with Rare Disease*, 2020, <https://www.youtube.com/watch?v=axDl6w4Adaw>; *Kid in vr Talks about Living with Rare Disease*, 2019, <https://www.youtube.com/watch?v=ZvKCpn4vnl4>.

⁷ *Wie Ist Das EINE UNBEKANNTE KRANKHEIT ZU HABEN?*, 2022, https://www.youtube.com/watch?v=MVQb_5rQZBI; *Wie Ist Das GEHÖRLOS ZU SEIN?*, 2021, <https://www.youtube.com/watch?v=OK5jZYHHsJE>; *Wie Ist Das SCHWER AN COVID ZU ERKRANKEN?*, 2021, <https://www.youtube.com/watch?v=0RG6JY3PGec>; *Wie Ist Das MUSKELDYSTROPHIE ZU HABEN?*, 2021, <https://www.youtube.com/watch?v=Yc3BDOHhaeA>; *Deshalb Sitze Ich Im Rollstuhl... - Die Wahrheit!*, 2020, <https://www.youtube.com/watch?v=MO5JaFXse30>.

do we make it accessible?”. Sometimes you miss something and while this question is a good step, it is mitigation. I also cannot help but wonder if accessibility was something that could have been discussed earlier in its planning and implementation. To me, with the knowledge that disabled people have been forgotten and made lesser than throughout human history through the ableist language we use to the various justifications to treat them as such⁸, this speaks of a systemic failure or many systemic failures that are happening at the same time.

This is **not** a text about what are the “best” design options and choices for an accessible world, **nor** am I asking “why are disabled people forgotten”. Both of these have been studied with a growing amount of literature. The question that I pose in this thesis is, how is

⁸ Hiam Al-Aoufi, Nawaf Al-Zyoud, and Norbayah Shahminan, ‘Islam and the Cultural Conceptualisation of Disability’, *International Journal of Adolescence and Youth* 17, no. 4 (Dezember 2012): 205–19, <https://doi.org/10.1080/02673843.2011.649565>; Kristi Upson-Saia, ‘"Resurrecting Deformity: Augustine on the Scarred, Marked, and Deformed Bodies of the Heavenly Realm." In Disability in Judaism, Christianity, and Islam, Edited by Darla Schumm and Michael Stoltzfus. Palgrave Macmillan, 2011.’, accessed 29 January 2022, https://www.academia.edu/6423316/_Resurrecting_Deformity_Augustine_on_the_Scarred_Marked_and_Deformed_Bodies_of_the_Heavenly_Realm_In_Disability_in_Judaism_Christianity_and_Islam_edited_by_Darla_Schumm_and_Michael_Stoltzfus_Palgrave_Macmillan_2011; Iain Stewart, ‘Commandeering Time: The Ideological Status of Time in the Social Darwinism of Herbert Spencer’, *Australian Journal of Politics & History* 57, no. 3 (2011): 389–402, <https://doi.org/10.1111/j.1467-8497.2011.01604.x>; Carolyn Burdett, ‘Post Darwin: Social Darwinism, Degeneration, Eugenics - The British Library’, British Library, 15 May 2014, <https://www.bl.uk/romantics-and-victorians/articles/post-darwin-social-darwinism-degeneration-eugenics>.

accessibility forgotten or left behind and how do we prepare people in creating accessible environments, with the desire to bridge this gap between the theory of literature and its praxis, with concrete tangible examples of what that looks like and examples of people affected by this. “Accessibility” and “accessible” are treated as more umbrella terms and concepts. It is not about “adding a ramp” but the idea(s) of it and its place as part of a larger picture/cycle, and societal fabric. To investigate this and to attempt to name this phenomenon, I will be touching on the state of accessibility and its politics by using libraries as community-driven spaces funded by and open to the public with the need to be accessible as an example. I ask specific questions related to the accessibility of affected example people, and I create an experiment that looks at the placement of accessibility in libraries in the minds of the public. From there, I establish the variation of their role as a parallel and reference for analysing the current systems for access.

The State of Accessibility

Physical Space

We have built libraries in physical buildings and electronically on a website, and my friend Ash, a wheelchair-user, wants to go to one. The first thing Ash did is find the closest library near them by doing a quick Google Maps search. Ash searched “library”, “public library”, “bücherei”, with different results.

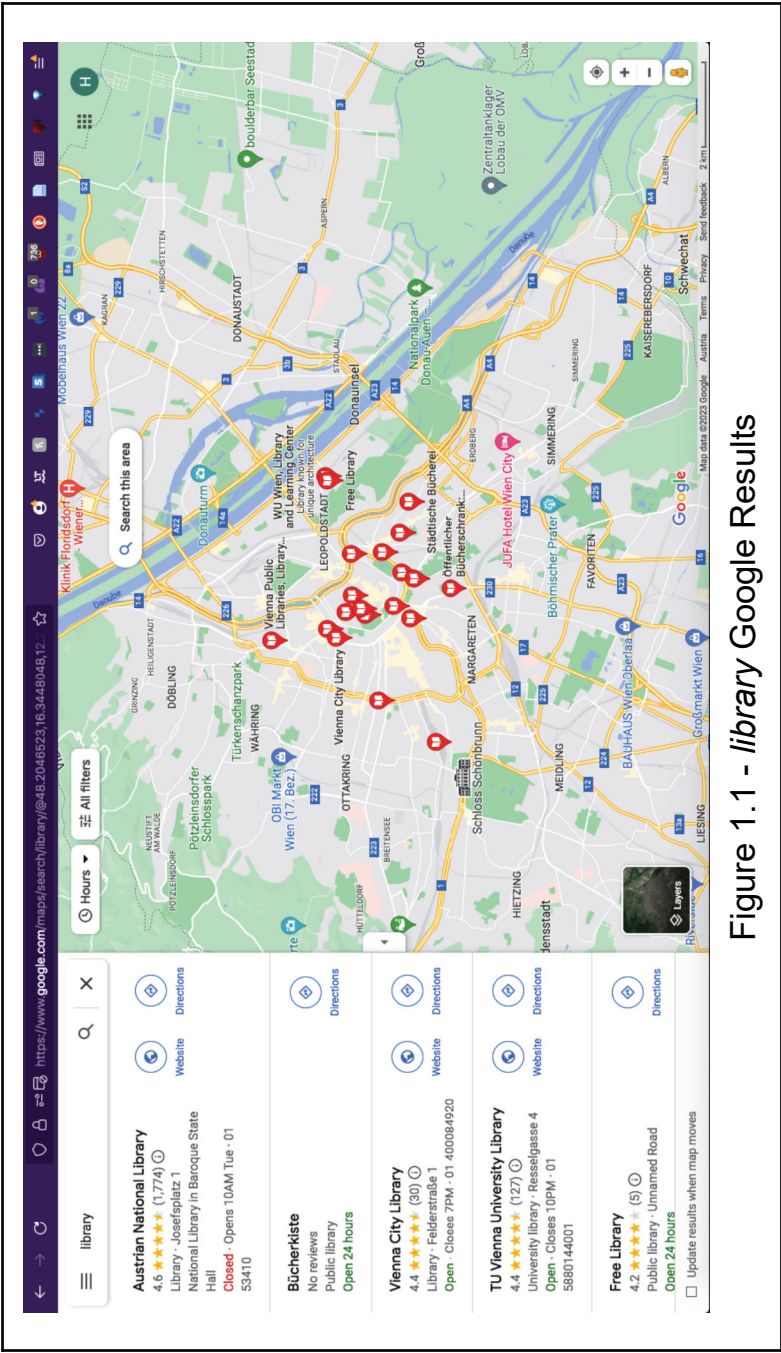


Figure 1.1 - library Google Results

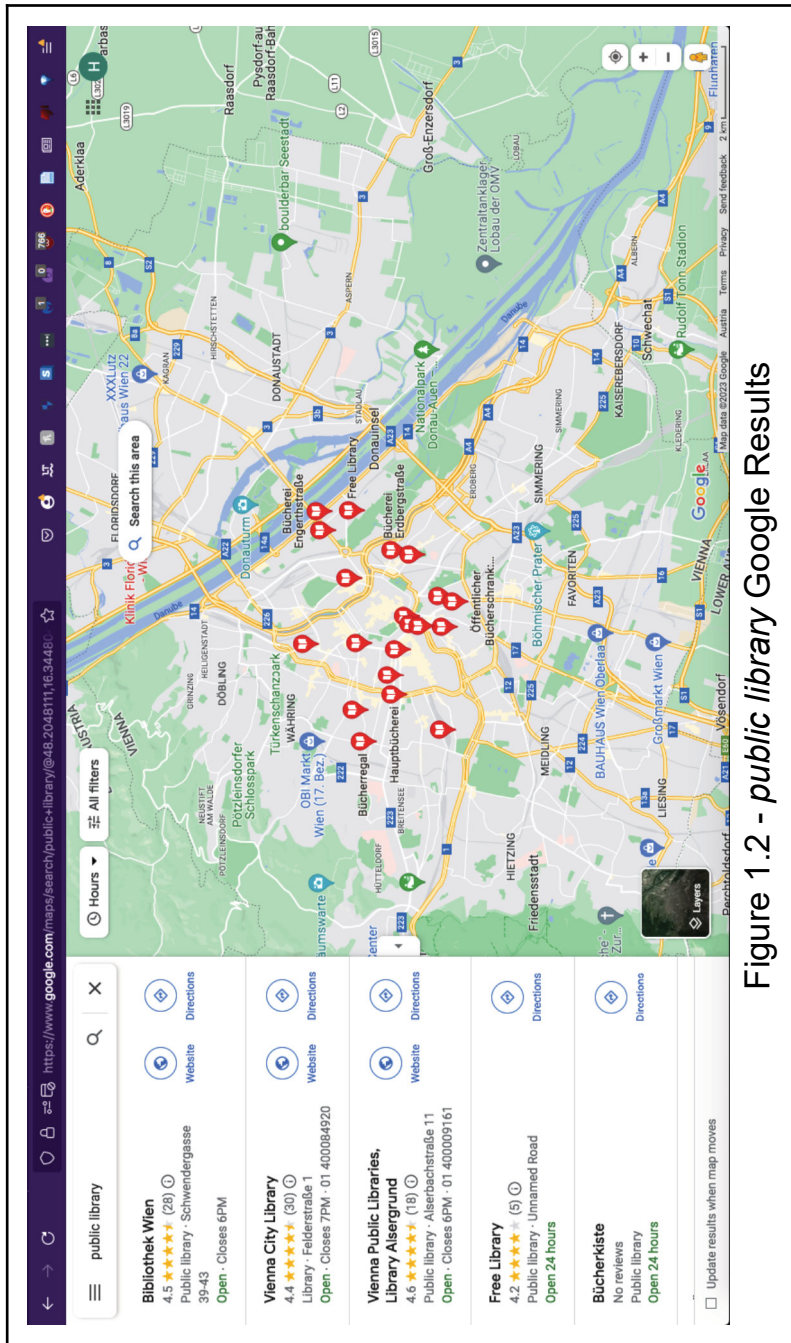


Figure 1.2 - public library Google Results

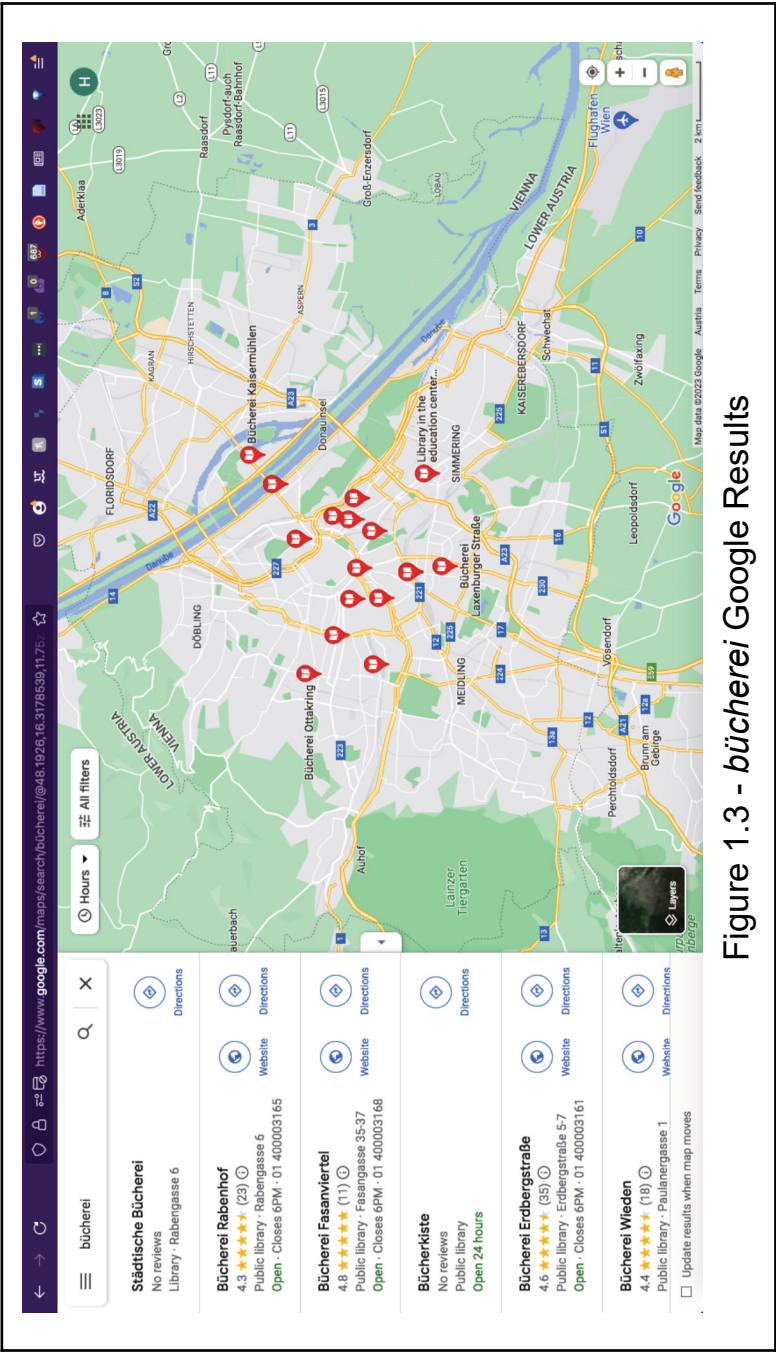
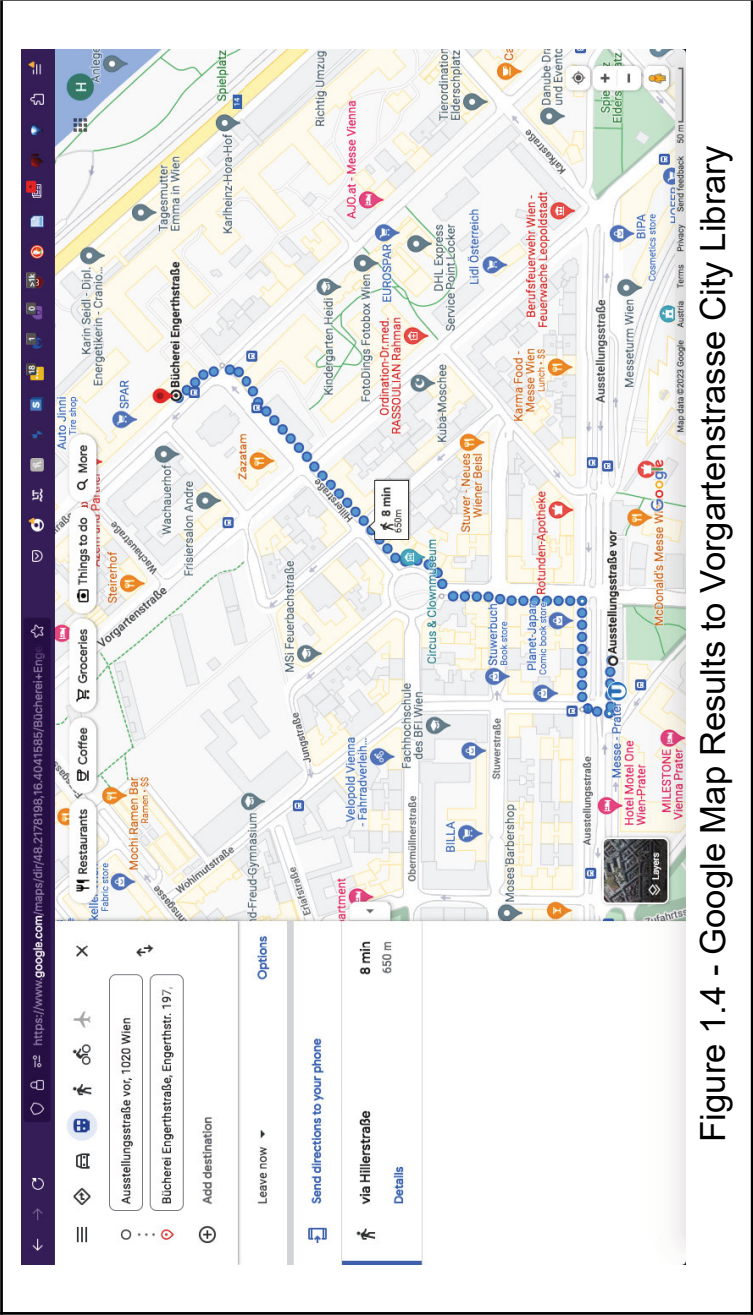
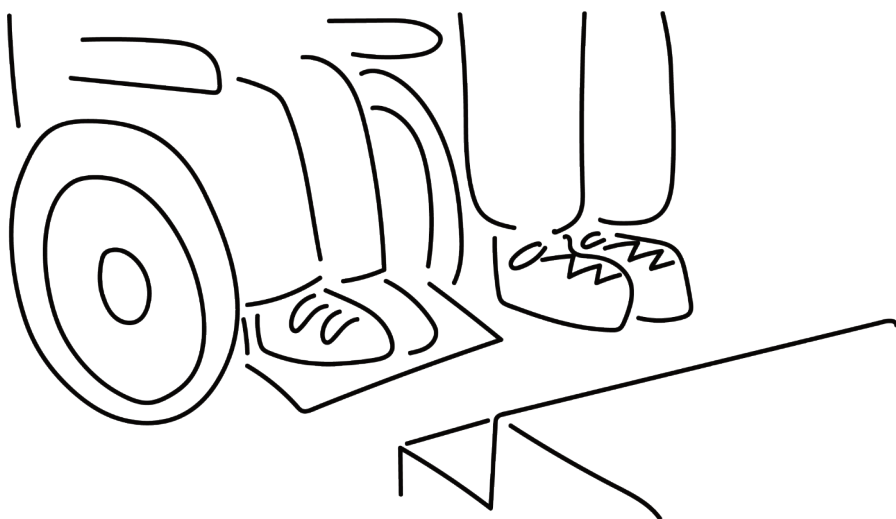


Figure 1.3 - bücherei Google Results

Ash knows they want to look at public libraries of Vienna that are scattered around the city. At the time, we were near the Prater and the closest one was near Vorgartenstrasse.



We, thinking that libraries are public buildings, make the assumption that they will be accessible. However, Ash, being cautious, decided to double-check, and was shocked to find out that the library we wanted to go to was not wheelchair accessible. In fact, not all *Stadt Wien Bücherei* (City of Vienna Library) locations are wheelchair accessible.



A drawing of two pairs of legs in front of stairs. One is in a wheelchair, the other is standing.

Based on the information on the official website of the *Stadt Wien Bücherei*, Ash noted whether they were wheelchair accessible, the size of their collection, and proximity to an *U-bahn* (underground train) station in metres through Google Maps website and app. While Ash knows that other public transport such as the tram and buses are in general accessible, accessible trams do not

come consistently everywhere, especially on a Sunday or holidays and the availability of wheelchair spaces in the buses depends on the size of the buses. On average, Ash can go between 2-5 km in total per day, provided the terrain allows it, and they have the energy, and so proximity to accessible transport systems is absolutely vital to getting around.

Ash collected and assembled the data in the following table.

Stadt Wien Libraries Accessibility, Proximity, and Collection Size

Stadt Wien Library	Wheelchair Accessible	Closest underground station in m	Media Collection (in k units)
Bücherei Engerthstraße	No	650	27,1
Bücherei Zirkusgasse	Yes	100	30,0
Bücherei Fasanviertel	Yes	1300	16,0
Bücherei Rabenhof	Yes	150	15,0
Bücherei Erdbergstraße	No	200	47,0
Bücherei Wieden	Yes	250	31,0
Bücherei Margareten	Yes	750	18,7
Bücherei Mariahilf	Yes	350	21,9
Hauptbücherei am Gürtel	Yes	50	401,9
Bücherei Alsergrund	Yes	650	16,1
Bibliothekspädagogisches Zentrum Bücherei der Raritäten	N/A	650	?

Bücherei Per-Albin-Hansson-Siedlung	Yes	160		16,2
Bücherei Laxenburger Straße	Yes	900		19,6
Bücherei Hasengasse	Yes	900		9,4
Bücherei Im Bildungszentrum Simmering	Yes	400		42,8
Bücherei am Leberberg	Yes	4200		15,5
Bücherei am Schöpfwerk	Yes	300		14,3
Bücherei Philadelphiabrücke	Yes	600		60,1
Bücherei Hietzing	Yes	2000		21,5
Bücherei Breitnerhof	No	1000		21,2
Bücherei Penzing	Yes	1100		31,2
Kinderbücherei der Weltsprachen	No	330		13,9
Bücherei Schwendermarkt	Yes	750		20,4
Bücherei Sandleiten	Yes	1500		22,2

Bücherei Ottakring	Yes	800	18,8
Bücherei Hernals	Yes	900	38,0
Bücherei Weimarer Straße	No	800	27,6
Bücherei Heiligenstadt	No	800	14,8
Bücherei Billrothstraße	No	850	37,0
Bücherei Pappenheimgasse	Yes	400	31,3
Bücherei Leystraße	Yes	550	14,5
Bücherei Weisselbad	Yes	750	38,8
Bücherei Großjedlersdorf	Yes	2800	22,9
Bücherei Großfeldsiedlung	Yes	50	17,3
Bücherei Seestadt Aspern	Yes	500	22,5
Bücherei Kaisermühlen	No	650	11,3
Bücherei Donaustadt	Yes	700	34,5
Bücherei Liesing	N/A	3000	38,1
Bücherei Altlaa	Yes	750	23,0

From this Ash counted the total number of libraries and their accessibility, if known, in the table below.

Total Libraries	39
Accessible Library	29
Not Accessible	8
Unknown	2

Based on the information provided by the website, approximately 74% of all the *Stadt Wien* libraries are accessible, 20% are not accessible and 5% having no information on its wheelchair accessibility.

Ash noted proximity in kilometres of accessible, inaccessible, and unknown accessibility libraries.

Amount of Collections in relation to Proximity and Accessibility

	Number of Libraries			
Proximity to the closest underground station (km)	Total	of which are accessible	not accessible	unknown accessibility
within less than .5 km	13	11	2	0
between .5 km and, including, 1 km	19	12	6	1
Number of Libraries within 1 - 1.5km	3	3	0	0
Number of Libraries within 1.5km - 2km	1	1	0	0
More than 2km away	3	2	0	1

The libraries more than 2km away from an underground train are ones that are closer to the edge of town and would require other modes of transportation such as the *Schnellbahn* (Fast Train) and the tram. Such is the case for Liesing, am Leberberg, and Großjedlersdorf.

Ash also calculated the size of the library's collection based on their proximity to the closest underground train station, as well as noting whether they were accessible or not. Ash noted that the *Hauptbücherei* (Main Library) makes about half of the total collection of media from accessible libraries. In excluding the Main Library, the majority of the collections come from libraries that are between 500m to 1km away from an underground train station.

Amount of Collections in relation to Proximity and Accessibility

	Total	within .5km	between .5 and 1km	between 1km and 1.5km	between 1.5km and 2km	more than 2km
Total amount of collections	1323,4	705,1	450,85	69,4	21,5	76,5
Total amount of collections accessible	1085,4	644,2	311,9	69,4	21,5	38,4
Total amount of collection inaccessible	199,85	60,9	138,95	0,0	0	0
Total amount of collections unknown accessible	38,1	0	0	0,0	0	38,1
Total amount of collections accessible excl. Hauptbücherei	683,5	242,3	311,9	69,4	21,5	38,4

Had Ash not double-checked, we would have been blind-sided, and would have spent more time and energy looking for another accessible library. Was it unreasonable of me and Ash to make the assumption that because libraries were public government institutions that benefited the community, they would be wheelchair-accessible?

Information Space

The library is the one of few locations in which you can use their basic facilities such as read the books there at the location, use their Wi-Fi, their computer, etc, without payment. It is a great place to hang out, to study, and to participate in events. You can also search for books in their library! In fact, the *Stadt Wien Bücherei* Website already lets you search through their catalogue on the front page, as shown in Figure 2.1.

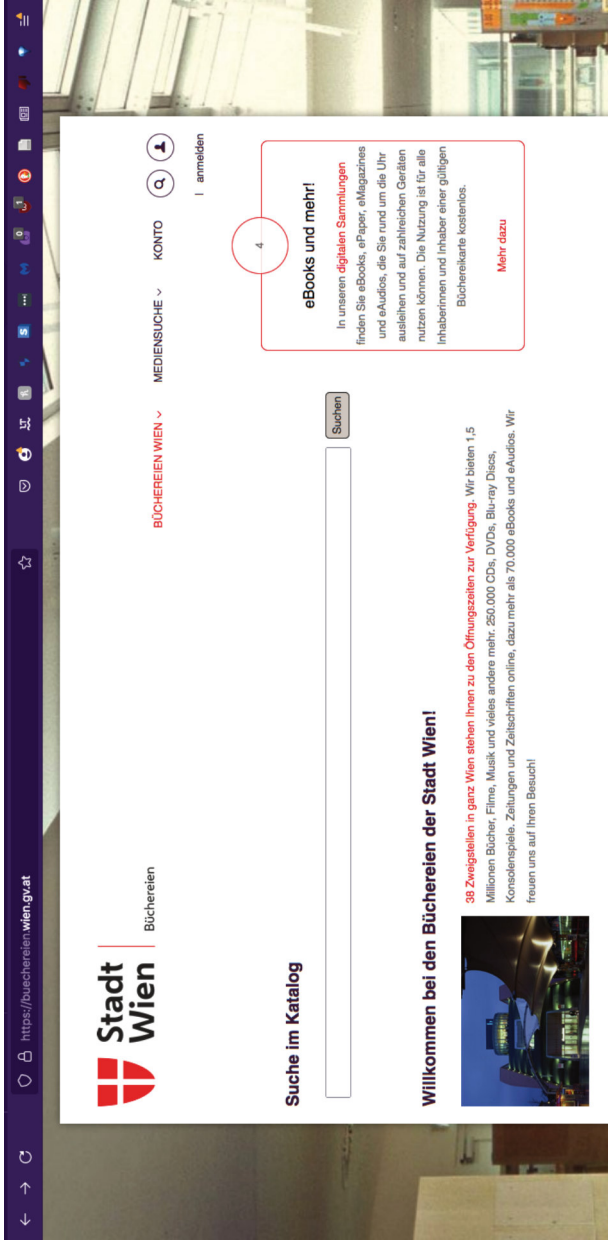


Figure 2.1 - Stadt Wien Bücherei Front Page

There is also a digital library catalogue, which you can find under *Angebote* (Offers) in *E-Medien* (E-Media), with several offers as shown in Fig 2.2..

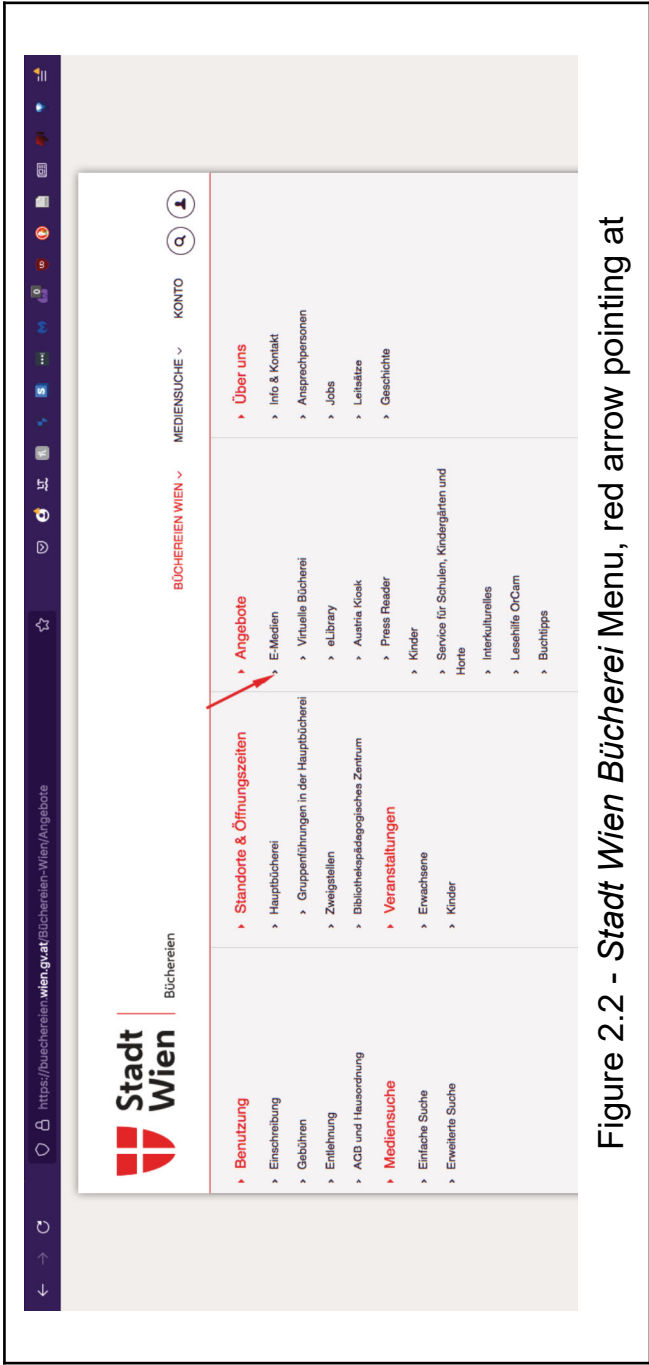
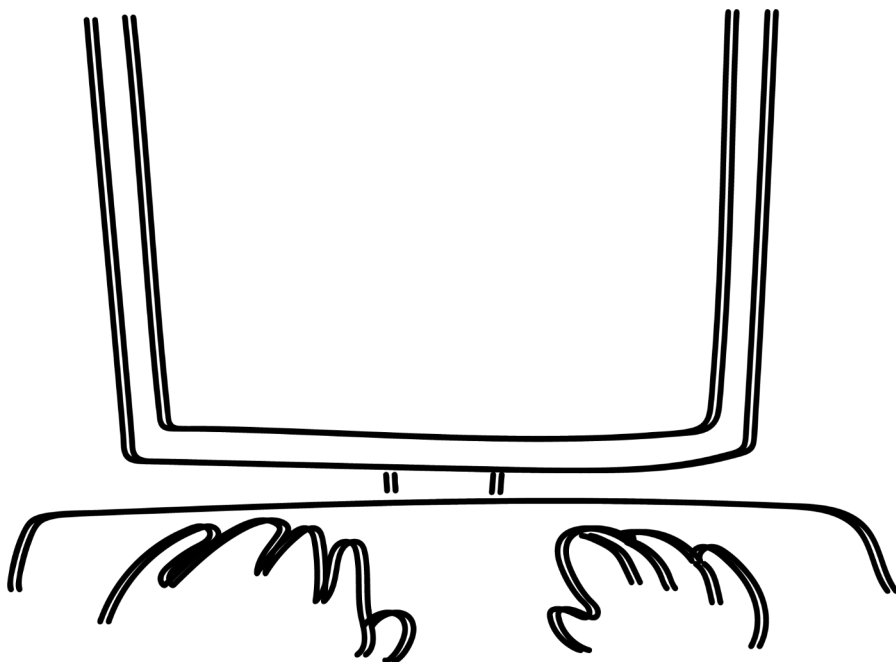


Figure 2.2 - Stadt Wien Bücherei Menu, red arrow pointing at

Kyle uses these double-lens glasses and it is his only one. The lens of his glasses broke, and he needs to wait about 5-10 working days to get them fixed. He knows how to navigate with limited vision, until he needs to read.



*A drawing of a Computer with hands on the keyboard.
The drawings are doubled.*

Squinting his eyes strains him. While Kyle enjoys the audiobooks, he wants to read a specific book that has just been returned. The e-book is unreadable, and Kyle is determined to get his hands on the physical book. Kyle needs accommodations. He checks the library website. Familiar with how accessibility information is found, Kyle checks the footer, shown in Figure 2.3.

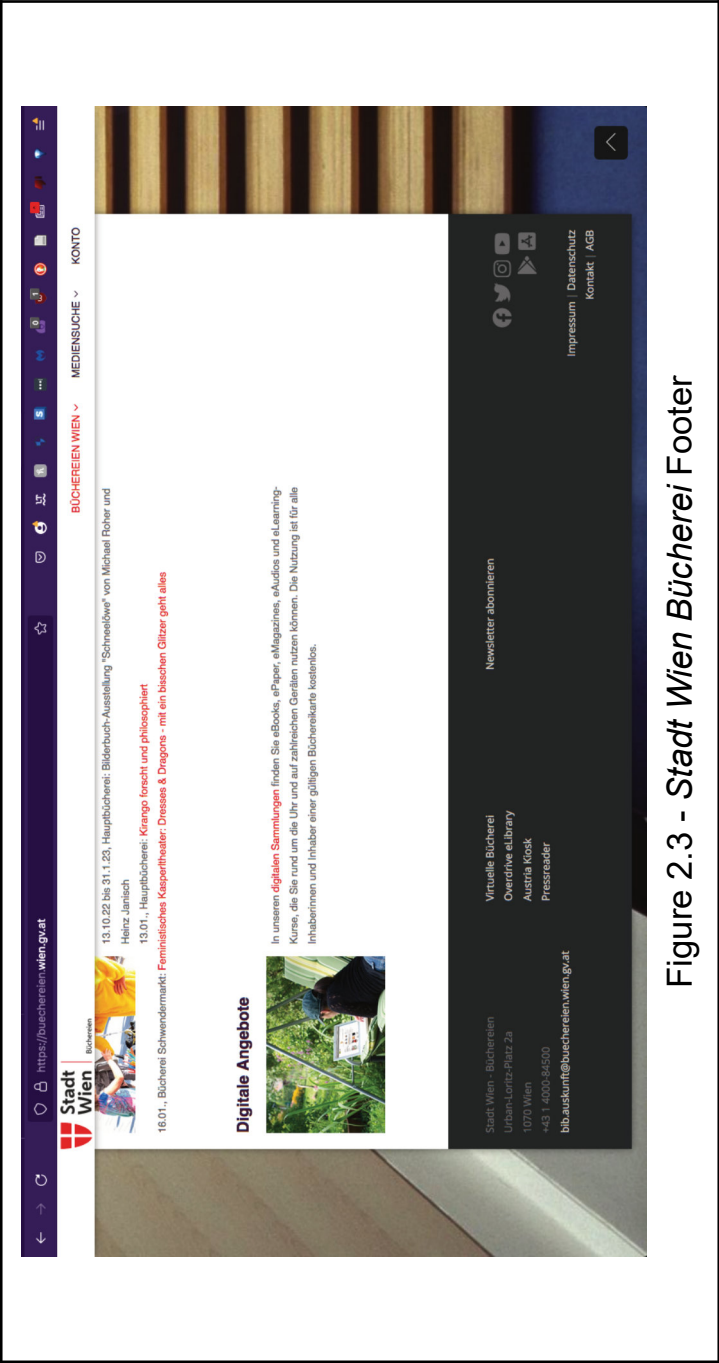


Figure 2.3 - Stadt Wien Bucherei Footer

He finds nothing. Strange. In other Vienna government websites, finding information about accessibility is easy, or at least searchable.

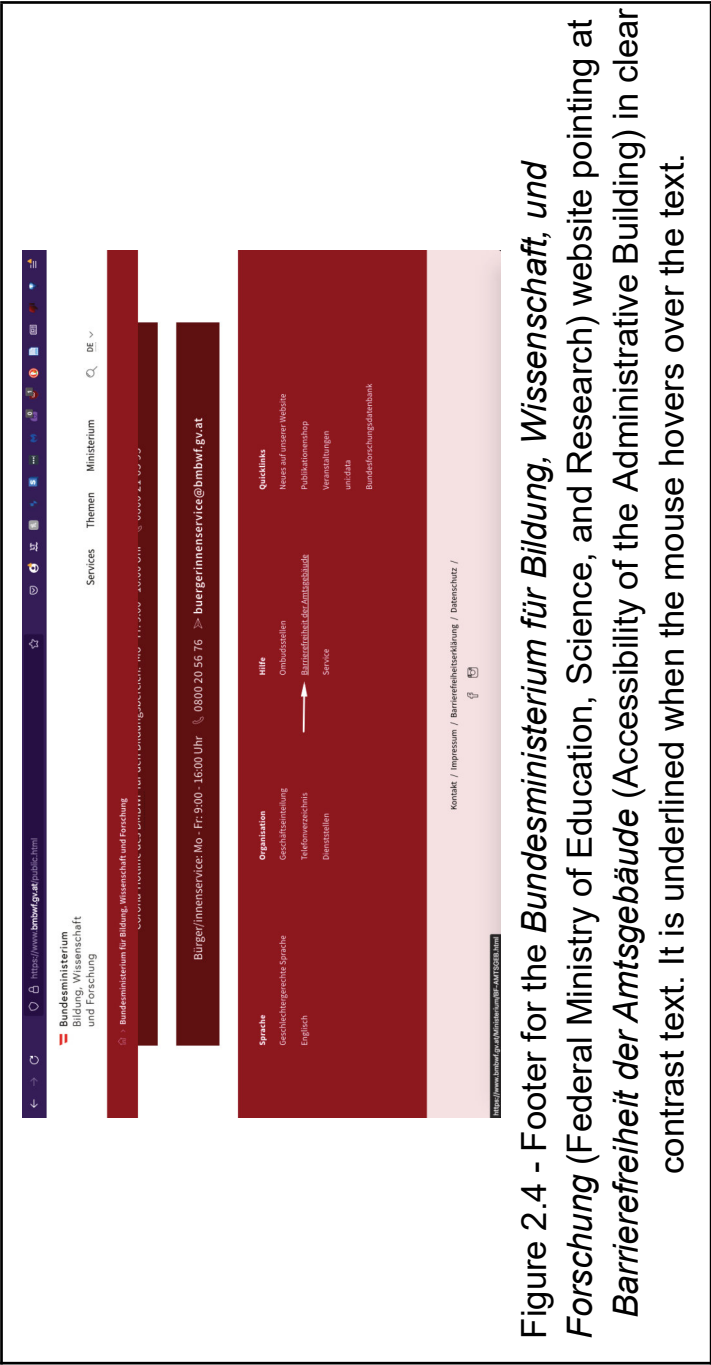


Figure 2.4 - Footer for the *Bundesministerium für Bildung, Wissenschaft, und Forschung* (Federal Ministry of Education, Science, and Research) website pointing at *Barrierefreiheit der Amtsbauwerke* (Accessibility of the Administrative Building) in clear contrast text. It is underlined when the mouse hovers over the text.

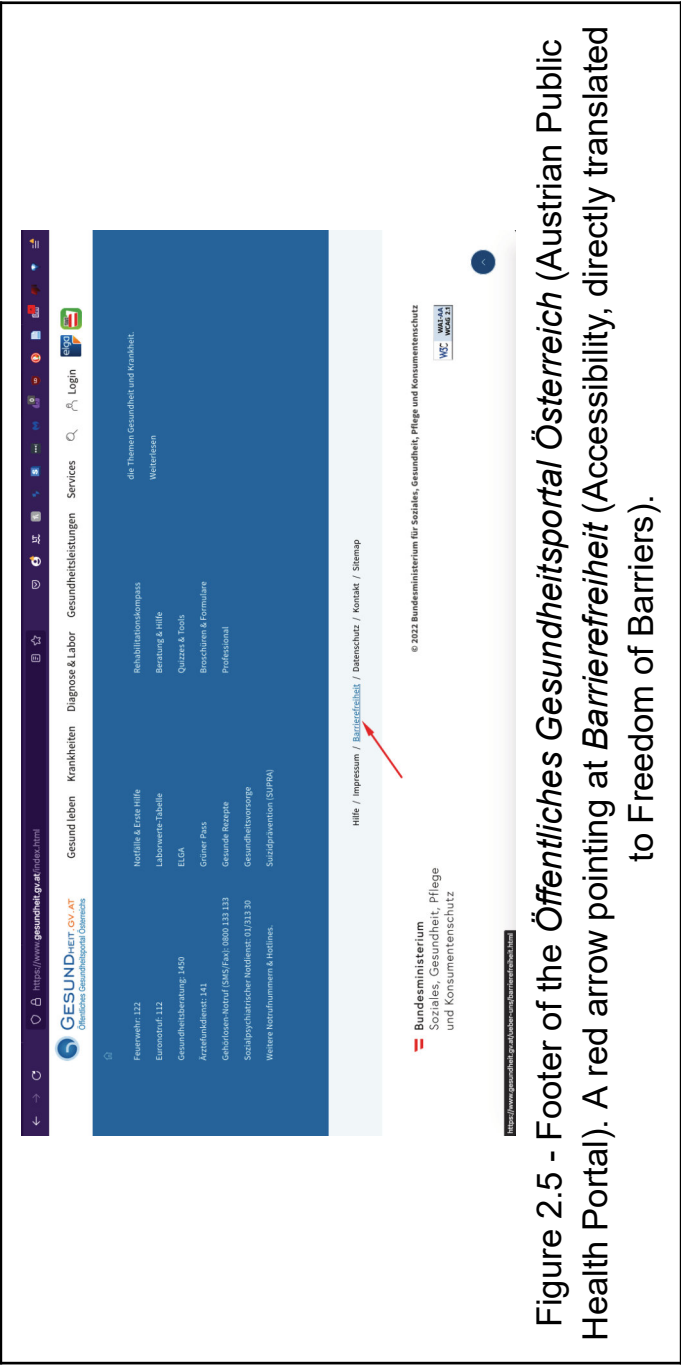


Figure 2.5 - Footer of the *Öffentliches Gesundheitsportal Österreich* (Austrian Public Health Portal). A red arrow pointing at *Barrierefreiheit* (Accessibility, directly translated to Freedom of Barriers).



For Figure 2.7, the footer for *Österreichische Gesundheitskasse* (Austrian Health Insurance) shows a *Barrierefreiheitserklärung* (Accessibility Statement), typical and necessary for online services to clearly state what contents of the website are accessible and what aren't, as shown below.

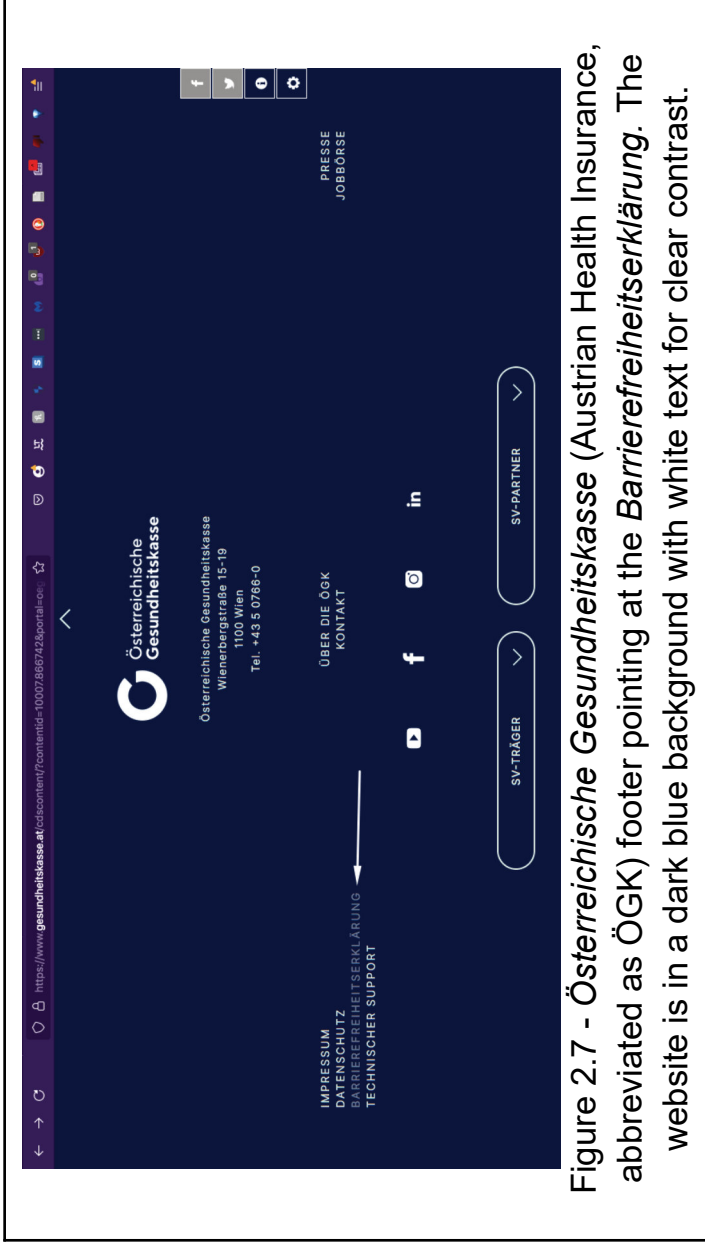
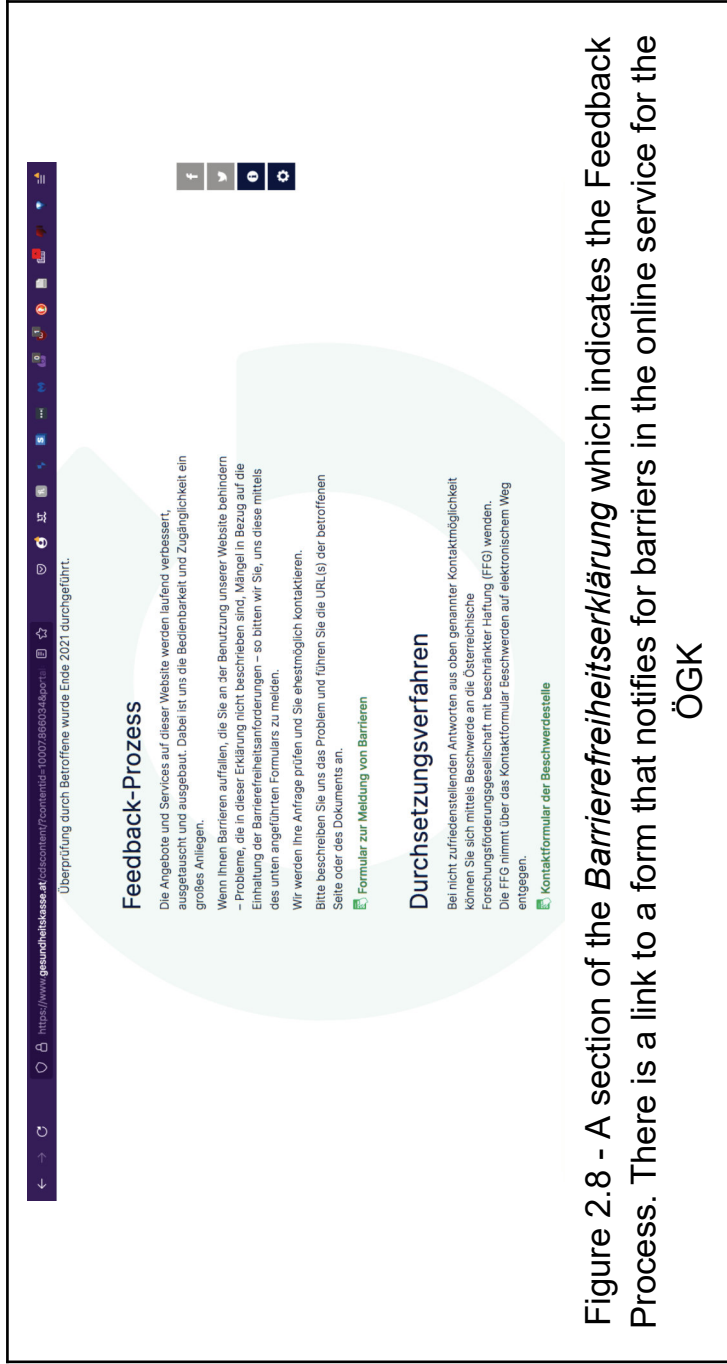


Figure 2.7 - Österreichische Gesundheitskasse (Austrian Health Insurance, abbreviated as ÖGK) footer pointing at the *Barrierefreiheitserklärung*. The website is in a dark blue background with white text for clear contrast.

This includes specific details such as colour contrast, HTML and CSS text, buttons, applications, and browsers and technology the website supports. They also include points of contact for feedback of the website, and how it is tested, as shown below in Figure 2.8.



The only thing that you can search on the *Stadt Wien Bücherei* website is their catalogue, as shown in Figure 2.9.

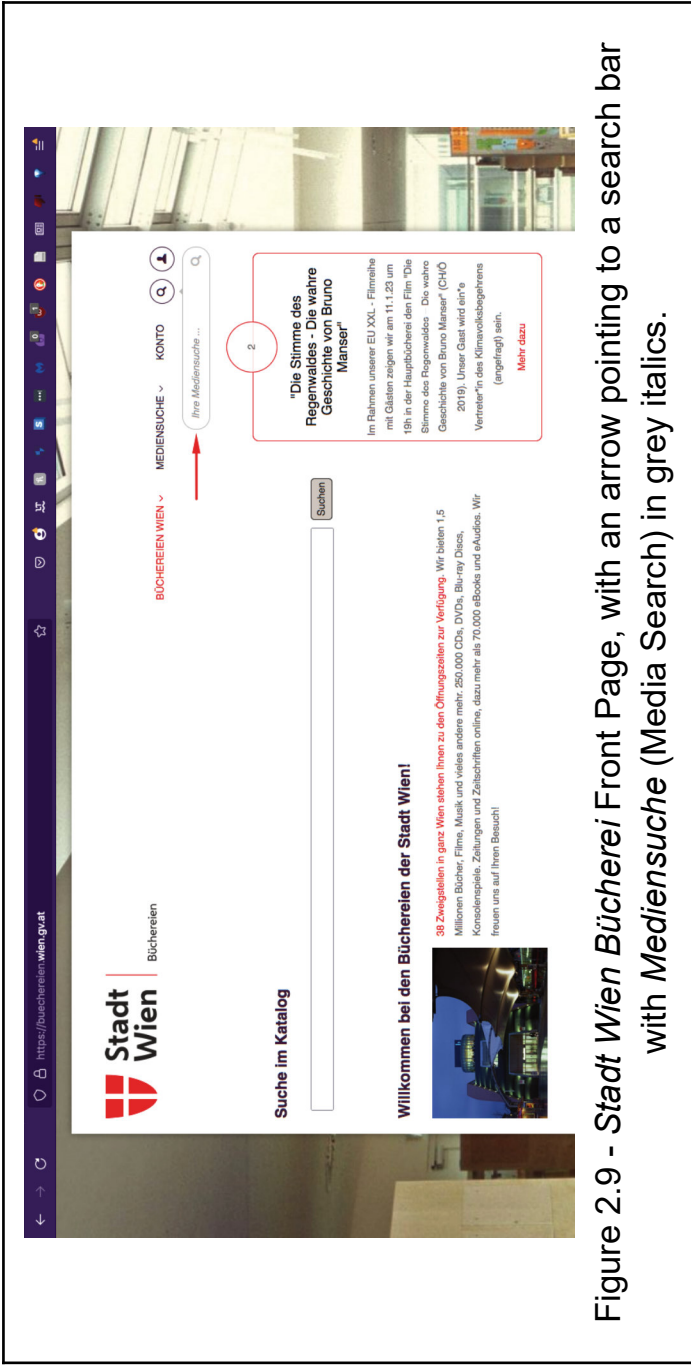


Figure 2.9 - *Stadt Wien Bücherei* Front Page, with an arrow pointing to a search bar with *Mediensuche* (Media Search) in grey italics.

So Kyle starts clicking around. The book is in a smaller library. But, he could take the book to the *Hauptbücherei* (Main Library) because, in Kyle's mind, the Main Library would surely have some accommodations. On the front page of the Main Library, he finds out you can borrow a wheelchair after depositing your ID, as shown in Figure 2.10. It does not tell you which kind. It is not what Kyle was searching for, so he moves on.

Figure 2.10 - Main Library with an arrow pointing at the wheelchair service.

He clicks the *Angebote* page, and he notices this *Lesehilfe OrCam* (Reading Help OrCam), displayed in the *Angebote* dropdown. Kyle guesses that OrCam sounds like some kind of camera based on the words itself. It *could* be what he is looking for. He clicks on it, it is worth a shot.



Figure 2.11 - *Angebote* page with a red arrow pointing at *Lesehilfe OrCam*

The page loads, and it explains what this OrCam is: a device that speaks out the words it sees through a camera, which allows blind and people with low-vision to read without much trouble. And, it is free!

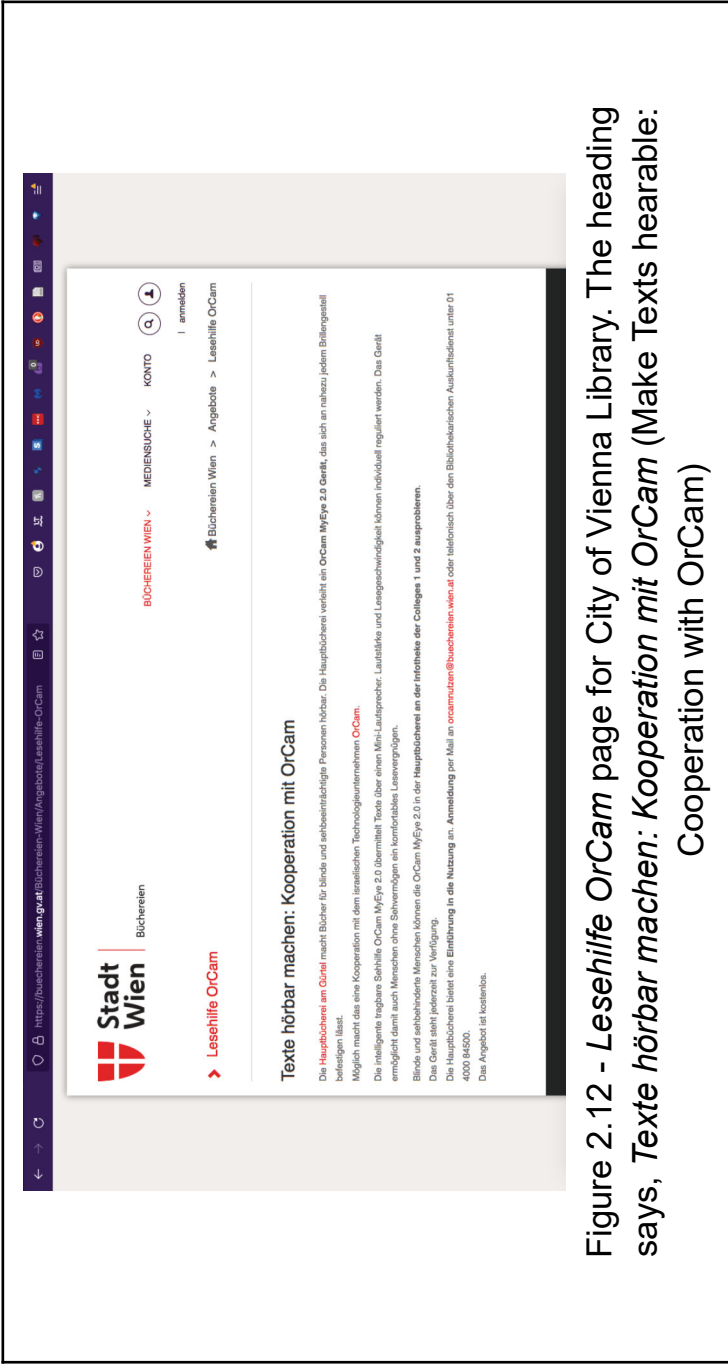


Figure 2.12 - *Lesehilfe OrCam* page for City of Vienna Library. The heading says, *Texte hörbar machen: Kooperation mit OrCam* (Make Texts hearable: Cooperation with OrCam)

He follows the instructions to sign up for a training session of the device and to book it. It is only in the main library but for what it's worth, it lets him read.

How long did it take Kyle to find information about accessibility accommodation? Could this have been communicated differently?

Head Space

For Sarah, German is not her first language, and is considered A2 according to the Common European Framework of Language References. She is an adult who has been working in Vienna for a year, and can get around with some basic phrases. She wants to learn and improve her German for better employment. Sarah knows that one of the many ways to improve language proficiency is to read books in that language. She heard about the Stadt Wien Libraries but has never set foot in one. So she decides to search for books around her level of German in the library catalogue.

Sarah gets nervous as she sees that the selection of books she finds at her level are targeted towards children and adolescents, as well as rewritings of classics such as Sherlock Holmes and Moby Dick, and fables.

Sarah understands that this is her level of German, that it will take time for her to be able to read higher level German, yet she feels embarrassed to borrow a book from that section. Big adults like her should not be in the young adult section.

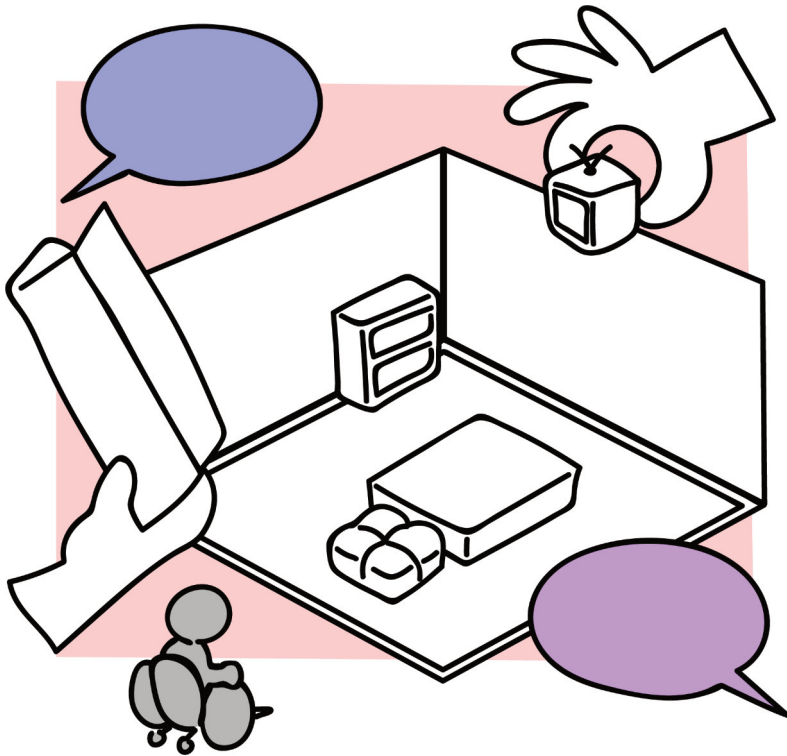


A drawing of a book and a hand holding it. Surrounding it are distorted humanoid figures with exaggerated laughter and a malicious aura.

When asked for whom the books were for, she blurts out, “Oh, they are for my son!” She does not have any children herself. After all, why else would an adult borrow these books? If she knew better German, then the books she borrowed would be serious and for her age. The librarians are friendly and are there to help but due to not knowing the language, she feels intimidated. As she keeps reviewing in her head, her anxiety keeps spiralling.

Should Sarah just read the books she finds?
Should Sarah try to find other books that are at her level?
Should Sarah find a different way to learn German?

Using a Toy as a Research Tool



A drawing of a box with different furniture inside, with a disembodied hand holding a television, and another holding a ramp. There are two speech bubbles, one in purple, the other indigo.

Accessible Dissonance

As I looked at the state of accessibility of libraries in Austria, I have made several assumptions about libraries that were related to them being public. Upon further research, such as their wheel-chair accessibility, collection, and information access, I found that there is more to be desired. Accessibility has become a topic with a growing number of eyes, and has especially been spotlighted during the COVID-19 pandemic. People such as single-parents, disabled people, and caretakers have been fighting for access into the workforce, specifically the ability to work from home, video conferences. It is not until that pandemic that these accommodations became available, as it is per circumstance that workers had stayed home, social distancing, and wearing a mask. Telework before COVID-19 has been only for a few industries and the rich.⁹

⁹ Drew Desilver, 'Before the Coronavirus, Telework Was an Optional Benefit, Mostly for the Affluent Few', *Pew Research Center* (blog), 20 March 2020,

<https://www.pewresearch.org/fact-tank/2020/03/20/before-the-coronavirus-telework-was-an-optional-benefit-mostly-for-the-affluent-few/>; Sara Atske, '1.

Emerging Change', *Pew Research Center: Internet, Science & Tech* (blog), 18 February 2021,

<https://www.pewresearch.org/internet/2021/02/18/emerging-change/>;

Ronald Orol, 'After the Pandemic, Teleconferencing and E-Learning Could Be the New Normal', Centre for International Governance Innovation, 2 April 2020,

<https://www.cigionline.org/articles/after-pandemic-teleconferencing-and-e-learning-could-be-new-normal/>; World Health Organization. Regional Office for South-East Asia, 'Whose Life Matters? Challenges, Barriers and Impact of Covid-19 Pandemic on Persons With Disability (PwDs) and Their Care Givers', September 2020,

International initiatives such as the United Nations Sustainable Development Goals have recently integrated disability into their goal, the Disability and Development Report clarifying and crystallizing how disability relates to the SDGs in a substantial way.¹⁰ When disabled people are left behind, other people are left behind as well, and even when disabled people are included, or certain facilities are built for access, its accessibility is questionable. It is considered optional and an additional feature.¹¹

From this research, I set out to look at the following:

- When asked to build ideal public spaces in a setting where accessibility is put last, as seen in the real world, what arrangement of space do people make?
- Whether the aforementioned dissonances and ableism exists?

<https://apps.who.int/iris/bitstream/handle/10665/336569/sea-disability-11-en-g.pdf?sequence=1&isAllowed=y>.

¹⁰ *Disability and Development Report: Realizing the Sustainable Development Goals by, for and with Persons with Disabilities : 2018* (New York: United Nations, 2019).

¹¹ Margo L. Rosenbach, 'Access and Satisfaction Within the Disabled Medicare Population', *Health Care Financing Review* 17, no. 2 (1995): 147–67; Lisa I. Iezzoni et al., 'Satisfaction with Quality and Access to Health Care among People with Disabling Conditions', *International Journal for Quality in Health Care: Journal of the International Society for Quality in Health Care* 14, no. 5 (October 2002): 369–81, <https://doi.org/10.1093/intqhc/14.5.369>; Syazwani Abdul Kadir and Mariam Jamaludin, 'Users' Satisfaction and Perception on Accessibility of Public Buildings in Putrajaya: Access Audit Study', *Procedia - Social and Behavioral Sciences*, AcE-Bs 2012 Bangkok, Sukosol Hotel, Bangkok, Thailand, 16-18 July, 2012, 50 (1 January 2012): 429–41, <https://doi.org/10.1016/j.sbspro.2012.08.047>.

I intended to test this hypothesis through play by using a toy that I have designed. Changes and adaptations will be made throughout the entire process as well, such as the design of the toy, and the data-gathering.

Data Gathering

Participants take the role of a “room planner” and to illustrate the frustration that comes with not being able to have everything that you want, with accessibility put last as subtext. It takes the form of an elevated doll house on a grid, and objects are placed into the grid. There are also three walls and one entrance.

The important components of this research toy that I set out to develop are,

1. Frustration - Not all items can be placed in the grid.
2. Playfulness - To be inviting and approachable, as well as prevent competitiveness and to keep it low-stakes.
3. Ease of use - making the objects themselves readable in your hand and visually, while also keeping the design simple to build.

What I want to investigate with this research is whether people are aware of their biases regarding accessibility. To test their awareness, I cannot explicitly state the purpose of this research. Additionally, I will only be testing out one type of room, specifically a library, it is a room with different and contradictory uses. It can be a place of work and study, a shelter, and a hangout. This

should give me wide variations of arrangements. How people choose to engage with the space is completely up to them and will be noted. The library also has many different kinds of objects, such as bookshelves, seating, and tables. But also, there is a computer, a TV, a media library, and a plant. An elevator and a ramp are individual objects that can be placed.

Cardboard Prototype

“From there through here” Künstlerhaus Exhibition at the Albertina Modern

For the “From there through here” Künstlerhaus Exhibition between 3.6.2022 and 6.6.2022, I created a model prototype out of materials that I scrambled together and some technology. This includes a scrabble board from Flying Tiger, various boxes weighted with rice, painted with acrylic. I additionally attached a passive infrared sensor camera that took pictures of every move people made for further analysis. I placed instructions on the table that read in all-Caps *build the ideal library with the pieces here* with an arrow pointing towards the pieces. The visitors are free to make their arrangements.



An image of a cardboard box painted black and white, sitting on a wooden coffee table with a yellow leg. Stuck on the table is a QR code. Attached on top of the box are wires and sensors, powered by a wall outlet. Inside the box is a wooden scrabble grid, with various colourful miniature furniture inside. Outside the box are other miniature furniture and an elevator attachment. Outside of view is a wooden chair. Image courtesy of Ivonne Gracia.

Findings

I could not ask them all personally what their thought process was for each arrangement, so I can only speculate based on the images. The following findings were based on when I was present to ask their thought process.

When the pieces initially were made, the idea was to have numerous pieces. But when I looked again and found that, you could just barely have all the pieces, and it created the illusion that there is a solution that uses everything. Visitors would keep attempting to place all the pieces into the board. It is important to note that there is no “win” condition. The instructions are specifically worded to be open for interpretation, and what I essentially wanted is who they were thinking about when constructing this public space. When asked to build “ideal” spaces, “ideal” can be interpreted as having everything, that all the pieces must be used, and that there must be a solution that uses everything. This led to the board being crowded with items.



Figure 3.1 - An example of an arrangement with several pieces.

One even tried to remove the board to apply both the lift and the ramp on both sides.

Another observation was just disregarding the board grid itself. Some people put items on top of each, like the TV on top of the table. One put the large bookshelf diagonally. Others put the objects in different orientations.



Figure 3.2 - An example of an arrangement of pieces placed on top of each other.

Another observation is a consistent theme of “No Screens” for various reasons. Some do not think that a TV or a computer has any place in a library. The idea that a library is a place where you read and/or work specifically is still ingrained in people’s minds. Some arrangements are also very minimalist, with a bench and small bookshelf.

A limitation is that there are only two accessibility pieces I made: the ramp and elevator. I definitely understand that they might not be clearly indicated

shape-wise. I was conflicted whether to correct this in the next iteration of this model or not. On one hand, the ambiguity creates a wild variable, creating interesting arrangements. One example that I had people say was that some people read the lift as a swimming pool.

I also understand the limitation of there are two accessibility pieces out of nine and that not using the ramp is not necessarily an indicator of explicit ableist bias. It is required by law to be accessible or to make a declaration of accessibility. Not having any accessibility nor being transparent about it is unlawful.¹² While the law cannot ask you what it should look like, as of the start of the thesis in 2022, Accessibility Design is more optional than mandatory in architecture programs if they even provide it. To mandate constructing public spaces that can be used by everyone, which includes disabled people, and to make facilitating that voluntary is contradictory.

¹² 'Barrierefreiheit', Sozialministerium Service, accessed 7 March 2023, https://www.sozialministeriumservice.at/Menschen_mit_Behinderung/Barrierefreiheit/Gleichstellung_und_Barrierefreiheit.html.

Angewandte Festival 2022

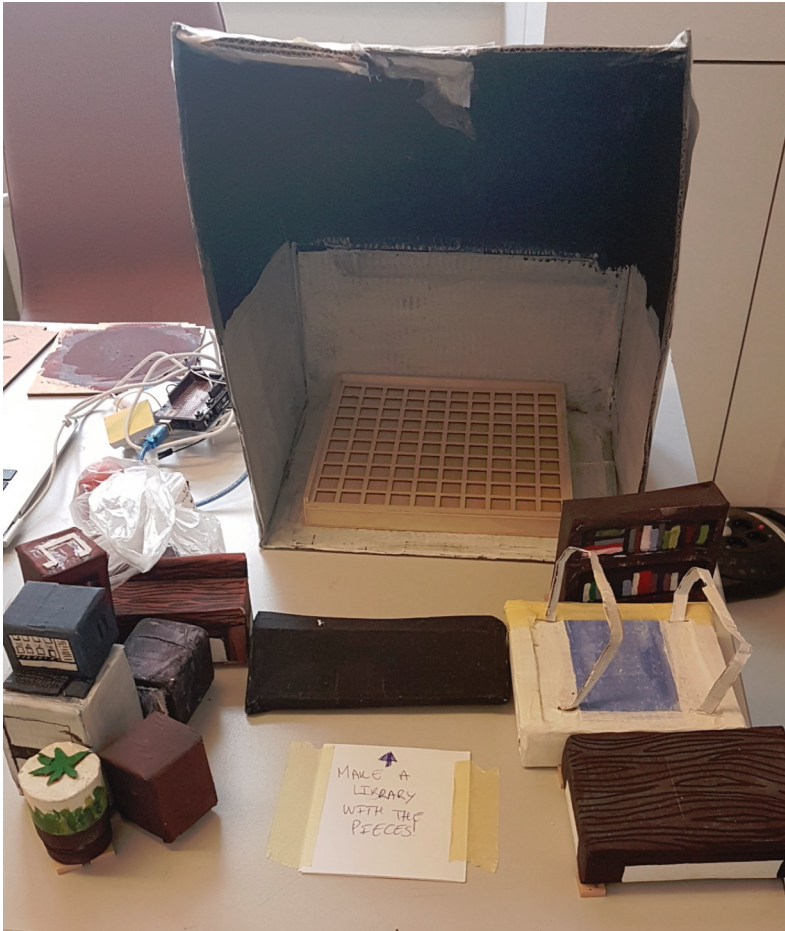
Unfortunately, I found that the code that I used saves everything to the SD Card, it stops at 256, and then it overwrites it in such a way that it creates a new file so, there is no way to recover it. I tried having the images be sent to an email, but there was no library for WPA2-Enterprise Networks like eduroam, which the Angewandte University uses. When I tried this library at home, the connection was far too weak, or it kept reconnecting. This called for a change in my data approach for this entire project. The technical difficulties with this project forced me to switch from a quantitative research analysis to a qualitative interview approach. In hindsight, this made far more sense. I was talking about a social issue and its dissonance, so turning this prototype into a jumping off-point for discussion made sense.

For this, I arranged my table to facilitate an interview and with a toy/wood workshop background. The idea is to assume the role of a toy-maker who is prototyping. I asked my participants if they were interested in participating and how it will be recorded for research. While it is not a lie, I am omitting the theory explanation. The participants will arrange the pieces and will be asked three questions after making the arrangements.

1. What did you think of the toy?
2. What is your experience with Libraries?

3. Who did you think about when making this arrangement?

The answers will be recorded on paper along with a photo of the arrangement.



An image of a cardboard box painted black and white on a work desk. Stuck on the table is a piece of paper saying, “make a Library with the pieces” in block print and an arrow pointing to the inside. Inside the box is a wooden scrabble grid. Outside the box surrounding the piece of paper are various miniature furniture, an elevator, and ramp attachment.

Findings

Over the course of the Angewandte Festival 2022, I interviewed 31 people in total, some answered as a group, others came in pairs, and some alone, so it comes to a total of 26 answers. They all had a variety of different backgrounds and the majority were students while others were guests. As for the arrangements, I left them as it went, so people who approach the table work with what they see and change pieces if they feel like it. So this was a continuous process, similar to the Künstlerhaus in that new arrangements were made from the ones that already exist.

Overall,

1. When asked what they thought about the toy, there were a variety of answers.
 - a. Generally positive.
 - b. Many had general criticisms
 - c. Some were reminded of other experiences (playing in a doll-house)
2. Regarding experiences in the Library, people have mentioned at least 2 things and had a variety of adjectives to describe their library experience.
 - a. A variation of quiet or silent is the top one (6), followed by organised (4), uncomfortable (3), then relaxing and crowded sharing the same number of people who said that (2).

- b. The adjectives were varied, with both positive and negative connotations. Those who said it was uncomfortable have also said it was stressful or scary.
 - c. One said the library they visited had variety, while another said it was same-y. One said the library felt open, while another said it was not as accessible as they would like it to be.
- 3. When asked who they thought about when making the arrangement,
 - a. Majority of people said themselves, and sometimes another person along with themselves.
 - b. One made a distinction about whether it was a public or private library.
 - c. Some thought of a location.
 - d. Some thought about groups of people (young people, disabled people, people who push children's wagons).
 - e. Few people thought of the experience of the library, such as comfort, what made sense, and accessibility.

For the arrangements, I could not get a picture for all the arrangements because some put their arrangements back after we finished the interview. Out of the 25 arrangements I do have pictures of, 24 used an elevator or/and ramp, where 8 used an elevator and 18 used a ramp. They were all used as an entrance.

Wooden Prototype

As I was working on the prototype of the wood version, I messaged several organisations related to Disability and Accessibility for participants to test the prototype. Since this was about disability, I wanted to include disabled people and people who worked with disabled people. One of the organisations that got back to me was *Jugend am Werk* (Youth at Work, abbreviated in JaW), specifically one of the workshops open for disabled people with a focus on Art. I met with them to show the prototype, which was by then finished with the prototype.

It is a grid board with walls that are put together, all laser-cut on 4 mm plywood. Originally, I wanted to 3D-print pieces that I modelled in Autodesk Maya. Upon discussion, I realised the expense was too big for a lot of small pieces that I needed to also model in such a way that it pieces together. Many model pieces are just simple shapes, and it is not like I cannot apply that to wood. During the groundwork presentation, one of the students remarked that wood has a warmth and in hindsight, they were correct. This is especially true when considering the aesthetic of the more playful, doll house Künstlerhaus/Angewandte Festival 2022 version, and I want to keep this approachability.



An image of objects spread on two tables. On the left table are the painted miniature furnitures surrounding an A4 poster for building the library. Above it is a sign indicating to take pieces. On the right table is a grid and walls made of wood. There is a sign indicating to put the objects inside the wooden space.

Jugend am Werk (Im Werd)

We walked through the experiment that I used for the Festival, and immediately ran into a problem: The questions were complex. Because there are some people with cognitive disabilities, or non-verbal, I had to adapt the questions for them.

We then agreed on two dates where I would be present for the experiment. I repeated the same experiment with a modified set of questions.

1. Were you ever in a Library?
 - a. If Yes, describe your Experiences.
 - b. If No, is this what you think a Library looks like?
2. What is something that absolutely must be in a Library?
3. Who did you think about as you made the Library?
 - a. Did you think about yourself?
 - b. Did you think about other people?
 - c. Did you not think of anyone at all?
4. What did you think of the Toy?
 - a. Did you like it? Dislike it?
 - b. Was it easy to use or difficult to use?
 - c. Would you play it by yourself or with others, or does it not matter?

I also asked if they had any questions for me in the end before closing.

Findings

I spoke with several different people, ranging from guests, to disabled participants, even their spouses, and some workers as well. Some answers were ambiguous, others could not answer all of them.

Overall, from a sample of 16 people,

1. When asked about whether they have visited a library or not,
 - a. Most people have visited a library, describing their facilities and the atmosphere. (13)
 - b. Very few people did not visit a library (2)
 - c. One said, “not yet”.
2. For things that absolutely must be in a Library, the majority of people listed at least 1 thing.
 - a. Books and comfortable Seating Spaces were at the top. (5, and 4 respectively)
 - b. Few said Games and/or Toys. (2)
 - c. Few said nothing in particular or were satisfied with what there was.(2)
 - d. One said there should be a variety of things, while others were more specific

such as a kitchen, paints, computers, background music, clothes, and the option to buy the books.

3. When asked if they thought of anybody,
 - a. Very little thought about themselves (1)
 - b. Most people thought about other people. Most of those thought about specific people (6) such as family members, their spouse, their friends, their caretakers, while others thought more generally, such as thinking more about the function of the room than the people who would use it. (4)
 - c. Some did not think of anybody, sometimes for the same reason someone thought about other people. (5)
4. In regard to their opinions about the toy itself,
 - a. Overwhelmingly positive towards the toy, (14) with one finding it okay. One did not answer.
 - b. Most found the toy easy to use (9), some did not understand what some objects were. (5) Two did not answer.
 - c. Most said they would play it with other people (10), some don't care (3), and one answered alone (1). Two did not answer.

For the arrangements, I could not get a picture for all the arrangements because a lot of them put their arrangements back after we finished the interview. Out of the 18 arrangements I do have pictures of, 10 used an elevator or/and ramp, where 6 used an elevator and 7 used a ramp. 2 elevators and 4 ramps were used as entrances.

Jugend am Werk (Main Office in Thaliastrasse) 1st Attempt

The email for asking for participants in *JaW* has also followed into the main office, with three people wishing to volunteer. I decided to use the simplified questions as they brought a more quantifiable set of results.

Findings

Originally, three people volunteered from the email, but all fell sick on that day. So I decided to just interview one person, and it became a more in-depth interview where I asked them about how to improve the toy itself.

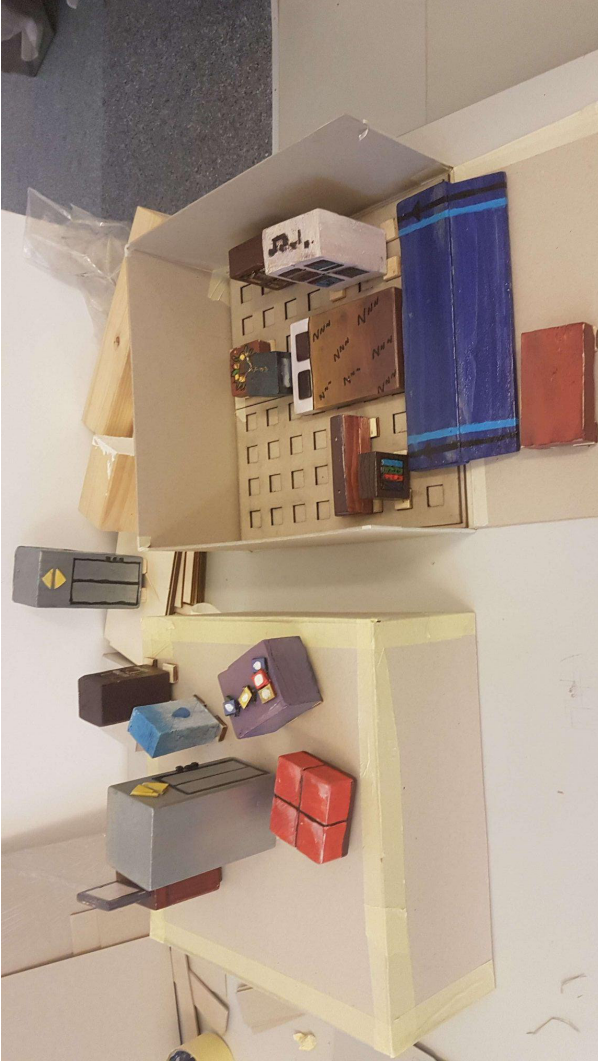
1. Regarding the library
 - a. They said they went to a library before, specifically the national library.
 - b. They said it was full, and that it was difficult to find the things they desired.
2. Something that should be in a library
 - a. It should be comfortable, and should be navigable

3. Who did you think about
 - a. They didn't think about anyone, said that they wanted to be spontaneous and didn't want to think about it.
4. Thoughts on the toy
 - a. She said that it was good, though it would be difficult for people with severe cognitive and intellectual disabilities. If there was direction on where to place things, such as having the pieces be numbered, then it could work for them.
 - b. They would play it if they had the time. They would play it with other people as you could help each other.

While it was only one person, I learned various things here, such as improvements on the shapes of the objects and perhaps a different kind of play.

Graupappe Prototype

For this version, I realized that the wooden prototype, while robust, was bending over time as it absorbed moisture. This was especially apparent as I was cutting the walls for the wooden prototype to finish it. The student assistant in *dex* at the Angewandte brought up the possibility of using *Graupappe* (Paperboard) as it was used for board games. I was unsure until I was convinced by the material's robust quality and price. For this, I also wanted to make a box for the pieces and so won't all be carried separately in a cloth bag.



An image of a cardboard box with various colourful miniature furniture. Inside is a grid, with various colourful miniature furniture inside. On the lid are other furniture and an elevator.

Jugend am Werk (Main Office in Thaliastrasse) 2nd Attempt

For this attempt, I set up another date again with the Central Office of JaW. This time, 8 people, which includes 2 leaders of the department, have participated in this testing. I repeated the same simplified questions but changed the “Who did you think about question” into “Did you think about someone?”. This made it into a clearer Yes or No question, that could be elaborated on with further, Yes or No questions.

Findings

In the 8 people I have asked,

1. When I asked if they have been to a Library before,
 - a. 6 people have said Yes, and 2 said No.
 - b. The people who have said Yes, described their experiences with various libraries, such as the National Library, the Rathaus Bibliothek, and the Main Public Library. They have also described the user experience and the atmosphere, such as having various different places to sit, the organization of the shelves, and how you can concentrate well in it. Though one has said that the Main Public Library is not so easy to orient yourself around it.
 - c. For the 2 people who said No, when asked if they would describe the Library as they have arranged on the board, they said Yes.

2. When asked what is something that needs to be in a Library,
 - a. The majority of people have listed “Reading” or “Books” either generally or specifically.
 - i. One has said that there needs to be Books in *Einfache Sprache* (Simple Language).
 - ii. One has said there should be other Languages
 - iii. One said Storytelling, and choosing the Books
 - b. Some have mentioned Book Organization in some kind
 - i. 1 said being able to look at Books and to understand where to bring it back
 - c. 2 listed seating.
 - d. Other listed items were a Telephone Room, good support, Staff, and an accessible Entrance
3. When asked, did you think about someone as you made the Library, out of the 8,
 - a. No, 6
 - i. Where 3 of them specified Nobody.
 - b. 2 said Yes,

- i. Where 1 said they thought of themselves and how they would feel comfortable, citing the Computer for Research and various seating
 - ii. 1 said a Wheelchair-user
- 4. When asked what they thought about the toy,
 - d. 7 people felt positive feelings towards the Toy, 1 said they did not like it. When I asked why, they said they personally did not like it.
 - e. They all said that the toy was easy to use, one commenting that it was intuitive.
 - f. 3 have said that they would play it either by themselves or with others, where 1 said explicitly both. 5 have said they would play it with other people, 1 mentioning with other Children, another said as a form of visualization.

For the arrangements at the main office, out of the 8 participants, 3 used either an elevator or a ramp. Out of those 3, 2 used a ramp and 2 used an elevator. Out of those, 2 used ramps as an entrance, and 1 used an elevator as an entrance.

Jugend am Werk (Am Seebogen)

For this attempt, I set up a date with the Workshops at Seestadt. This time I saw various people from different groups, with a total of 10 participants, where one was a pair.

Findings

In the 10 people I have asked,

1. When I asked if they have been to a Library before,
 - a. 6 people have said Yes, and 4 said No.
 - b. The people who have said Yes described a positive experience, one describing how they borrowed CDs, had lots of fun.
 - c. For the 4 people who said No, when asked if they would describe the Library as they have arranged on the board, they said Yes.
2. When asked what is something that needs to be in a Library,
 - a. The majority of people have listed “Reading” or “Books” either generally or specifically.
 - b. Two have said to wear a mask.
 - c. Two have some sort of Computer.
 - d. Others have listed media, such as DVDs, CDs, Audiobooks
 - e. One said Clothes
 - f. One listed everything that was on the board (Water, TV, Ramp, Plant, Seating, Books, Media)

3. When asked, did you think about someone as you made the Library, out of the 8,
 - a. 6 said Yes, where
 - i. 1 thought about people generally
 - ii. 1 did not know who
 - iii. 3 thought of the people who worked there, built it, or other adjacent
 - iv. 1 thought of their friend specifically
 - b. 4 said No
4. When asked what they thought about the toy,
 - a. 7 people felt positive feelings towards the Toy, 1 had an unclear opinion, 1 said they had both mixed feelings towards it, and provided reasons why. 1 said they did not like it.
 - b. 9 found the toy easy to use, the one finding it difficult due to their blindness.
 - c. 3 have said that they would play it either by themselves or with others, where 2 said explicitly both. 5 have said they would play it with other people, where for 2 it was not a choice due to their disability. 2 have said they would play it by themselves.

For the arrangements, some participants arranged twice and not everyone stayed to answer the questions. Of the total of 17, 15 used a ramp or an elevator. Out of them, 15 used an elevator and 15 used the ramp. That being said, the number of people who used the ramp as an entrance is 9, and for elevators it is 3.

Vienna International School as Design Demonstration

For the model that was made for the final master's thesis, the methodology of this work needed to be adapted for a school class. In this instance, I would ask the class to build the ideal library, document the arrangement, and then use the toy as a spring into the subject of the demo. I was asking groups of people, which changed the dynamics slightly. This class was composed of Grade 11 Students who are doing their International Baccalaureate Diploma, and this demonstration is focused on the process of the design of the toy and so I revealed the hidden background of the toy. I remember when I was a student and was asking for "real-life applications". I was hoping I could appeal to them in that way, while also delivering concrete techniques that they could employ in their own projects.

Findings

The format was different as it was more informative, and focused on the design of the toys. I brought the cardboard prototype, the wooden platform prototype, and the cardboard prototype along with the pieces. What was important to mention of this demonstration was the materials and the factors that go into making this toy, as well as the process. In the end, I ask the students to consider how they would go about testing a product that requires motor and/or sensory abilities, as well as the difference between designing a product with the intention to be accessible and a product

that is accessible despite its design. The former is about accessibility that is employed and thought through, and the latter is when accessibility is considered after the design and production of the product.

I did a short survey for feedback. What the teacher would like to have seen was the ergonomics of the toy, and having a more interactive aspect of the presentation, such as having some students try to build something together and having them justify their decisions.

Experimental Games Culture Games Design Workshop Demonstration

Similar to the Vienna International School demonstration, this demonstration was about the process of the making of this toy and I only brought the greyboard prototype. I had to be open about the true purpose of this toy. Aspects such as the appearance of the toy, how the shape of the prototypes changes how people interact with the toy were mentioned. This was for the Masters Program at the Angewandte called *Experimental Games Culture*, and I tailored the demonstration towards that, such as the difference between a game and toy, where the former has a win/lose condition and rules to facilitate that, and the latter does not have that and relies on the imagination of the player. Calling this toy a toy is strategic to lower the player's guard and to not be worried about making "wrong" or "right" choices.

Findings

After the demonstration, there was a comment and Q&A session. One person commented on how the aesthetic of the toy invokes nostalgia of other wooden toys in their childhood. They also commented on how the paperboard prototype form looks accessible enough. To that, I commented that if a ramp and an elevator are individual pieces that could be placed, it already communicates that the area is not accessible.

There was a question by the professor about the portability of the toy and if I saw the toy as an art piece, especially in relation to Marcel Duchamp, who made mini museums of his artwork.¹³ I said I was more focused on the function of this toy, but the aesthetic of the toy mattered, to create intrigue. She also mentioned how the camera in the cardboard prototype was used, and I confirmed that this was to record the positions of the objects, and how this toy was playful and was masking an experimental intention.

One of the students asked about how people interacted with the toy, specifically in terms of gaming personas, and their interaction. For someone who is achievement-focused, there is an instinct of wanting to make the “right choices” and making a mental checklist,

¹³ ‘A Museum in Miniature: Exploring Duchamp’s Boîte-En-Valise with Matthew Affron, Curator of Modern Art at The Philadelphia Museum of Art’, Philadelphia Museum Of Art, 23 July 2020, <https://store.philamuseum.org/blog/a-museum-in-miniature-exploring-duchamps-boteenvalise-with-matthew-affron-curator-of-modern-art-at-the-philadelphia-museum-of-art/>.

as opposed to someone who plays as a social activity, who will maybe have a conversation about their country's library culture, for example.¹⁴ They also felt like a "trap", but in a positive way: there is no indication of what is the best way, especially considering the fact that you could not fit everything inside. In the spirit of that, I mentioned that not everyone followed the grid, and demonstrated this by placing a table and a TV on top of the table. I also mentioned that because you could not fit everything inside the grid, specifically that one object would be left out, it creates frustration and that this frustration is intentional. It is evil but necessary to demonstrate what happens when accessibility is not integrated.

When asked how I got to this topic, I spoke about accessibility in games, specifically how many of the options that were accessibility options I benefited from. The takeaway was similar to the Vienna International School demonstration, specifically in being mindful about what the games one designs requires, but also about how to design a game or toy that mimics an experience. Mimicking an experience is especially great to allow people to understand a feeling or experience without the high stakes involved.

¹⁴ Alexis Pamboris, 'Overview: Newzoo's Gamer Segmentation and Gamer Personas', *Newzoo* (blog), 16 July 2021, <https://newzoo.com/insights/articles/overview-newzoos-gamer-segmentation-and-gamer-personas>.

Blind and Low-vision Prototype

For this version, I wanted to create a version that is accessible to blind people. This meant that the objects were levelled down to an even, low level, and I added a braille tag for each object. I contacted the *Bundes-Blindeninstitut Wien* (Federal Blind Institute of Vienna, abbreviated to BBI) for some volunteers. What I got back was a reply from teachers of the *4. Klasse* (4th grade) who were willing to volunteer.



An image of a paperboard box with white block objects, representing furniture. Inside the box is a grid, with various colourful miniature furniture inside. Outside the box are other miniature furniture and a ramp. All the furniture have a braille tag.

Findings

We started with an introduction round in one of the classes, where I introduced myself to the class and did a general round of our experiences of libraries. After this, with the combined classes, there were 5 participants.

In the 5 participants I have asked,

1. When I asked if they have been to a Library before,
 - a. 3 people have said Yes, and 2 said No.
 - b. For the 3 who said Yes, their experience with libraries has been generally positive. They described nice people, warm temperatures, and a quiet atmosphere. One said they could hear more. One person could not describe or did not know.
 - c. From the 2 who have said No, when asked if the way they arranged on the board was how they imagined a library, they all said Yes.
2. When asked, what is something that needs to be in a Library,
 - a. The majority of people have listed Books first
 - b. The next were tables, seats (and general places to sit), and media (CDs, audiobooks, audio plays, films).
 - c. Few said some kind of entrance and easy navigation (ramps, lifts, escalator)
 - d. For unique items, they have listed water, plants, working spaces, public transportation, and an air conditioner.

3. When asked, did you think about someone as you made the Library,
 - a. 3 have said they did not think of anyone,
 - b. 1 said they were thinking of no one,
 - c. And 1 said they were thinking of how they thought about libraries
4. When asked what they thought about the toy,
 - a. They all had a positive experience with the toy.
 - i. One said that they would not call it a toy, but a model (*Bauwerk*)
 - ii. Some have said there should be more of other pieces such as a lamp, and a clock
 - b. 4 found it medium difficulty, and 1 easy to use
 - i. Two said they found placing the objects in easy, but the arrangements difficult,
 - ii. One found it with medium difficulty because the braille tag were in different places in the objects
 - iii. And one said the arrangement was difficult but the placement alright
 - iv. The one who said it was easy to use also found placing the objects annoying (which was unique to how they place everything)

- c. 3 said they would play with the toy with others, 1 said it didn't matter, 1 said they would play it by themselves.
 - i. Of the 3 that said they would play it with others, 1 said that it could be played with others but only sees it for looking

In terms of the arrangements, I got 6 images of arrangements, where 1 was from someone who was not participating in the questions. Out of the 6, all of them used either a ramp or an elevator, where 6 used an elevator and 5 used a ramp. In terms of them being used as an entrance, out of the 5 ramps, 4 were used as an entrance, and out of the 6 elevators, 2 were used as an entrance.

Results

To compile, the results come down to the following table below.

Raw Data of the Use of Accessibility Items

	Participants asked	Elevators or Ramps	Ramps	Elevators	Entrances of Ramps	Entrances of Elevators
Angewandte Festival	25	24	18	8	18	8
JaW im Werd	18	10	7	6	4	2
JaW Main Office	8	3	2	2	2	1
JaW am Seebogen	17	15	15	15	9	3
BBi	6	6	5	6	4	2
Total	74	58	47	37	37	16

First, I calculated the several percentages. For brevity, Elevators are shortened to E, and Ramps are shortened to R, and the percentages will be in their decimal form. Percentage of E or R is calculated by taking the *Elevators or Ramps* value and dividing that over the number of participants asked. Percentage of E is calculated by taking the E value and dividing that by the E or R value, and the same for Percentage of R. Percentage of Entrance E is calculated by tacking the Entrance E Value and dividing that by the E value, and the same for Percentage of Entrance R.

These results are shown below.

Percentage of the Use of Accessibility Items

	Percentage of E or R	Percentage of E	Percentage of R	Percentage of Entrance E	Percentage of Entrance R
Angewandte Festival	0,96	0,75	0,75	1	1
JaW im Werd	0,555555555 6	0,4	0,7	0,3333333333	0,5714285714
JaW Main Office	0,375	0,6666666667	0,6666666667	0,5	1
JaW am Seebogen	0,882352941 2	0,6	1	0,2	0,6
BBi	1	0,6666666667	0,8333333333	0,3333333333	0,8

From the results, we see that the Angewandte Festival participants used either a ramp or entrance, and they will be used as entrances. The participants of Im Werd used either about half the time, and they were more likely to use the ramp than the elevator. The Main Office used ramps or elevators the least, but when they did, they were entrances. The elevator was an entrance half the time, and the ramp was always an entrance. Am Seebogen used either frequently, but the elevators were used less than the ramp by a wide margin. For BBI, they all used both either, and the ramp was an entrance more than the elevator by a large margin.

In general, either elevators or ramps were used either not often, or they were used very often. Between them, ramps were preferred over elevators. Ramps were used as entrances consistently, while for elevators less so.

Discussion

The Arrangements

During all the testing, I noticed that people sometimes avoided the holes of the grid or just did not follow the grid at all. While I was already used to the phenomena that some did not follow the grid lines, this was especially apparent when testing at *JaW*'s facilities. Some understand putting these objects in the grid, while others just place it anywhere regardless of whether it fits the grid or not. In the Am Seebogen testing, there was one group that, due to the interruptions of the supervisor, changed how the participants interacted with the toy, specifically in that they viewed it as a game to win. This meant that they used all the pieces, and were also afraid to be wrong.

Another pattern I noticed is that people started with the little objects first and then placed the largest object last. The ramp and the elevator are the biggest objects but are placed on the edge of the grid. In the end, the ramp was often the last thing to be placed, if placed at all. There were a few times in which adding ramps was done first, one done in *JaW*, and one by a child in the BBI.

In many cases, people were either compelled to use all the objects and to fit everything inside, went for a minimalist functional approach, or they placed objects according to their experience of a library. Sometimes, this meant the object was included but not in its intended use

or placed in the grid, such as the TV being on top of a table, or a small bookshelf being used as a table. The placement of these objects was heavily dependent on whether people could understand what they were. For one that was using the blind prototype, they actually stood the objects up. This was especially interesting as they placed it with the pictogram showing, and they ended up not taking much space at all.

The Interview

In the Angewandte Summer Festival 2022, the questions were more open-ended, making a qualitative analysis. This also meant that the questions themselves were not as accessible. In *JaW*, the questions were more direct to accommodate people who had a cognitive disability. This also made the analysis more concise, and the flow of the conversation was easier to maintain. This solidified the interview process.

For the *JaW* am Seebogen, there were 5 groups of people who were stationed at Am Seebogen in Seestadt, though two of those groups I could not interview for different reasons. For the first group, I could not get concrete answers, even with Yes-No questions. I have worked with one non-verbal person from a different group, and they answered my questions because they showed interest. This group did not.

I could not interview another group without being interrupted by the supervisors and them talking over the

people I interviewed. The supervisors calling the toy a game, implying winning, already influenced how the participants answered, and I wanted to salvage whatever answers I could get. I could have said I wanted the participants' opinions. Also, angering the supervisors stresses the participants out. The supervisor's impatience with my questions and their comments on the nature of the toy itself affects the participants. Were they being protective? Maybe. But no matter how you looked at it, the supervisors had power over the participants. This group was also *Hausverwaltung* (housekeeping/property manager). What happens after testing is out of my hands. Erring on the side of caution in this case might have been the safest, albeit not the best, choice.

For the BBI, there was a pattern in the objects they said absolutely should be in a library, specifically the prevalence of media, such as audiobooks, audioplays, and films. Books came first, media related items came second, seating was less said, and then they said at least one unique item. Compared to others, such as Books, seating, and then at least one unique item, having no or low vision, meant an emphasis in different kinds of experiences with media.

General Opinions about the Toy itself

Generally, people had positive feelings about the toy. They found the toy easy to use, and placing the objects into the grid was understandable. The one

common problem was reading the objects and the direction on where the objects should be placed. The bulletin board, large table, and the elevator were the ones that were the least understood.

The large table that was mistaken for a bed, and for another table as well. After a few interviews and watching the arrangements, I decided to change it into a bed, by adding pillows. While the objects are more representational, I recognize that some libraries have beds or places to sleep, and decided to have the bed fit that role. I scraped the bulletin board, and turned to making the elevator and ramp more easily understood. While the ramp was easy to understand shape-wise, I added arrows to indicate direction. I spoke with one of the social workers at *JaW*, and they said that if the elevator stood upright, it would be far more understandable, and I decided to follow through on that. The results were that the elevator and the bed were used far more.

Two people have mentioned that the different shapes of the individual objects made seeing over the board difficult, one by someone who had a physical disability, and another who had no vision. While this might mean sacrificing the dimensionality of the object, this change would help the blind participants, as they would not hit the other objects as they feel around the board.

When I made the flatter, blind-accessible version, the problem of overseeing everything vanished. The additional aspect of having a braille tag also made this ultimately more accessible to the children at BBI. The

children at BBI found the toy somewhat difficult while playing, either they found the placement easy but building the library hard, and/or they found it easy because of the braille tag but difficult because it was in different places. One said they would have liked to keep the toy in their classroom. This version is generally an improvement from the previous that I tested.

Limitations

While the point is that you can place the objects however you like, I understand the desire to have some kind of direction on where to place the objects, especially when considering cognitive and intellectual disabilities that present severely. While the people at *JaW* understood the instructions, it cannot be said for everyone.

The other additional limitation on this project was the sample size. I could not ask many people who had sensory disabilities such as blindness and deafness. The majority of the people asked were those who had a cognitive disability, a physical disability, or both. I would like to have spoken to people of other disabilities. Speaking to one completely blind person and how they interacted with the shapes of the objects themselves, let me consider other possible shapes the objects could present. While I could have tested the toy myself by being blindfolded, I found the way they interacted far more valuable because the fundamental life experience of

having no sight at all was different from someone who does not have it temporarily. For example, due to how they depended on their hands, their hands were low to the table, and they ended up knocking other objects over. In hindsight, it made sense that a toy that requires eyesight should be tested for different levels of vision. Thankfully, I was able to test this with the *Bundes-Blindeninstitut* and the prototype that was for people with blind and low-vision. I wished there would be more.

As for the testing itself, the results are limited. The questions themselves changed a few times before it became concrete. If I were to redo this, I would use a quantitative approach from the beginning, which meant quantifiable results, and more questions relating to the toy. Instead of “What did you think of the toy?”, I ask, “What did you like about the toy?”. While this may lead to a circuit of Yes-No questions, this clarification is necessary, and it lets me break down bigger questions into smaller ones.

The readability of the objects had a strong influence on the likelihood of its use. If you were to follow the grid, the cardboard prototype only has space for the ramp or elevator, not both. In the cardboard prototype, the elevator was used often because it was read as a pool. When I recreated the objects in wood for the larger prototypes, there were objects I had to scrap such as the bulletin board and remake others such as the elevator.

This meant that you could use both the ramp and elevator in the same grid.

Future of the Toy

While buildings and its accessibility is the scope for this thesis, I have found that this toy can be used for various other fields and contexts. For example, when I showed this to the supervisors in the main office of *JaW* commented that it can be used to visualize the spaces. When I showed my toy to my therapist at the time, they commented on its possible therapeutic contexts. When considering how you cannot place all the objects inside, this can give a rise of anxiety, and an opportunity to learn how to manage it.

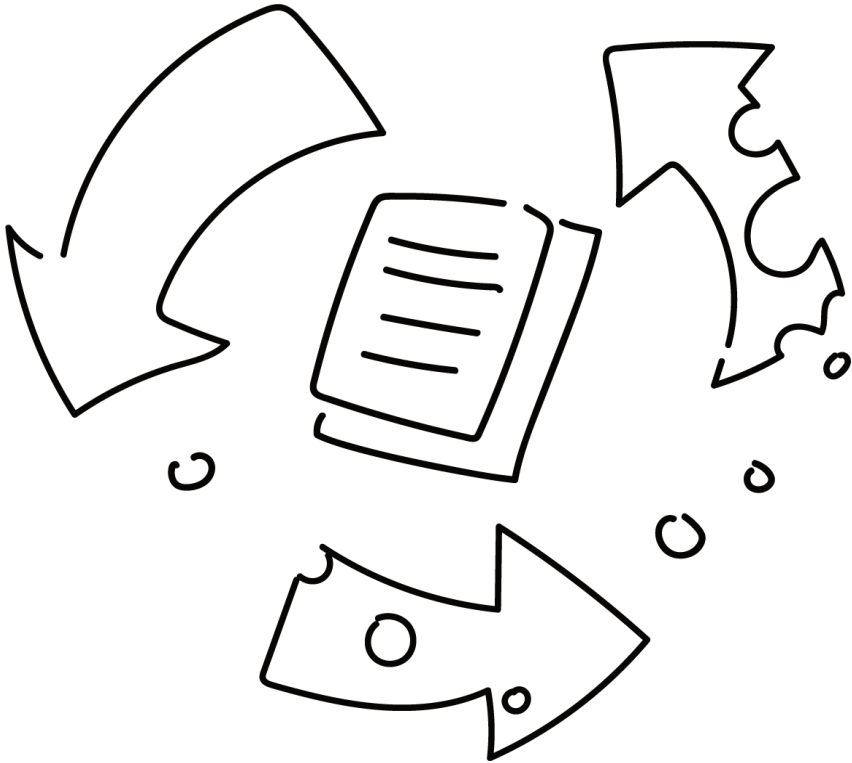
Considering the majority answered they would play this toy with other people, it could pose a collaborative opportunity. I wanted to consider different prompts, turning this toy into a game, but I see that people can do that by themselves. The toy can exist without the prompts as well. I notice I already laid the groundwork for the prompt approach by asking participants to build a library.

With the version of the toy that was intended for accessibility for blindness and low-vision, I was able to focus down to a design that was accessible. Hopefully, in the future, I want to make a version of this toy that could be manufactured with cheap material, specifically Graupappe.

Summary

To summarize, the toy was well received. It is more likely to be played with others, and is generally easy to use. Generally, people had positive experiences with libraries, overwhelmingly saying books were one of the most important things to have in a library, and also at least one unique item. For arrangements, a majority used some method of entering the library, and it was often the ramp over the elevator. So what do these results mean for Ash, Kyle, and Sarah?

Naming the Name: The Cycle of Exclusion



A drawing of 3 arrows forming a circle. Each arrow disintegrates and surrounds a document.

Disintegration by Design and Politics

Earlier in the thesis, I introduced Ash, Kyle, and Sarah. They dealt with some kind of barrier when interacting with the *Stadt Wien* library: Ash dealt with physical barriers that prevent them from entering a library, Kyle dealt with information barriers with the structure of the website, and Sarah dealt with personal barriers relating to the selection of books.

Based on the results of the experiment, I can say that people don't think about physical accessibility consciously but would use a ramp if given the option, understand that finding information or books is important and necessary for the function of the library, and people tend to include various different objects such as media and books, but also plants and create a pleasant space. For Ash, it is ambiguous: it is good that a ramp would be used if someone asked, but the limitation is "if someone asked". For Kyle, trying to find information can be difficult, and the arrangement of the furniture plays a role here. Having everything in one area could be overwhelming for him. And for Sarah, as people generally understand that creating a pleasant space is important, emphasis on diversity of content, especially media, is a welcome choice.

All these inaccessibilities that the three experienced lead to inability to participate and to feel belonging. Ash assumed that a public community building will be wheelchair-accessible but found out that is not the case for every one of them, which can imply that a

wheelchair-user is someone who does not belong in certain communities. While Kyle did not have to read that book, he wanted to and had to go through greater lengths than usual to find out if it was even possible. For Sarah, she feels inadequate due to her low German proficiency, especially as an adult and as a worker. All this combined, it creates a mental image that certain groups of people are unwanted.

Ash

Earlier in the thesis, Ash did a comparison where they looked at the City Library Website and counted how many were actually wheelchair-accessible and how many were close to an Underground Train Station. The *Bundes-Behindertengleichstellungsgesetz* (The Austrian Federal Act on the Equalization of Persons with Disabilities) demands that public transportation be accessible. The United Nations Sustainable Development Goals have been including disability and accessibility into the implementations of the SDGs. Vienna also has a UN Office, conveniently called, the United Nations Office in Vienna or UNOV. For this section, disabled people can be excluded despite accessibility built in by illustrating the path people would take to get to the UNOV from the Underground Station Kaisermuhlen VIC.

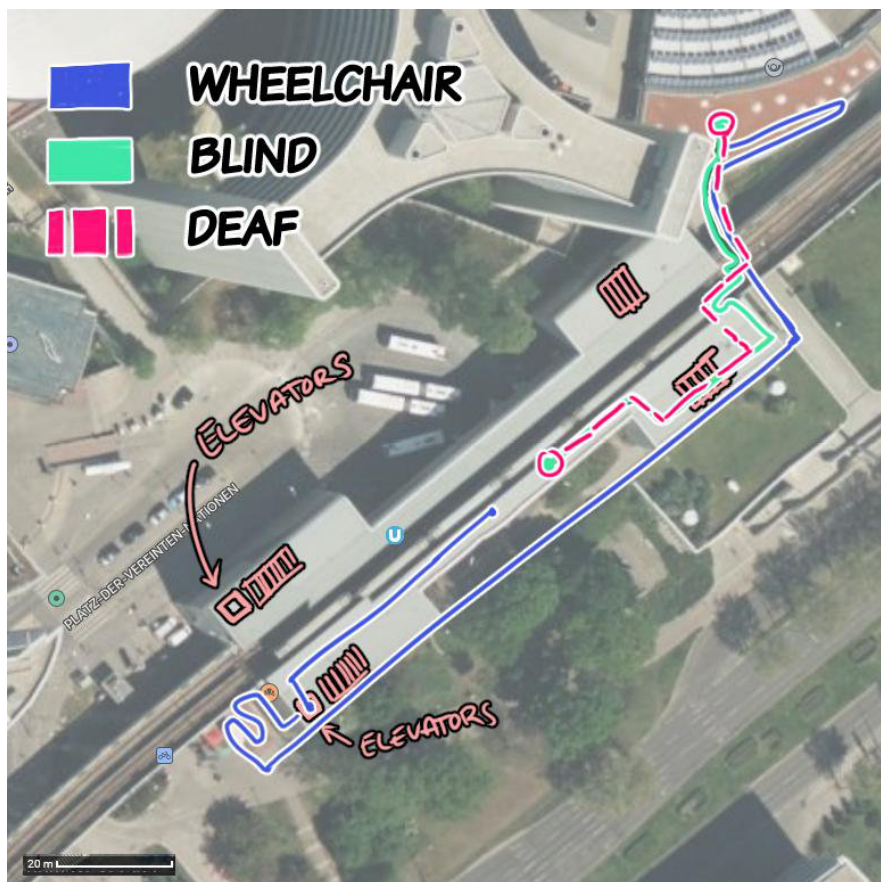


Figure 4.1 - Annotated map of the different pathways a person would take from the Kaisermühlen/Vienna International Centre United Nations Office of Vienna. Blue indicates the wheelchair path, cyan indicates the blind path, and a magenta dashed line indicates the deaf path.

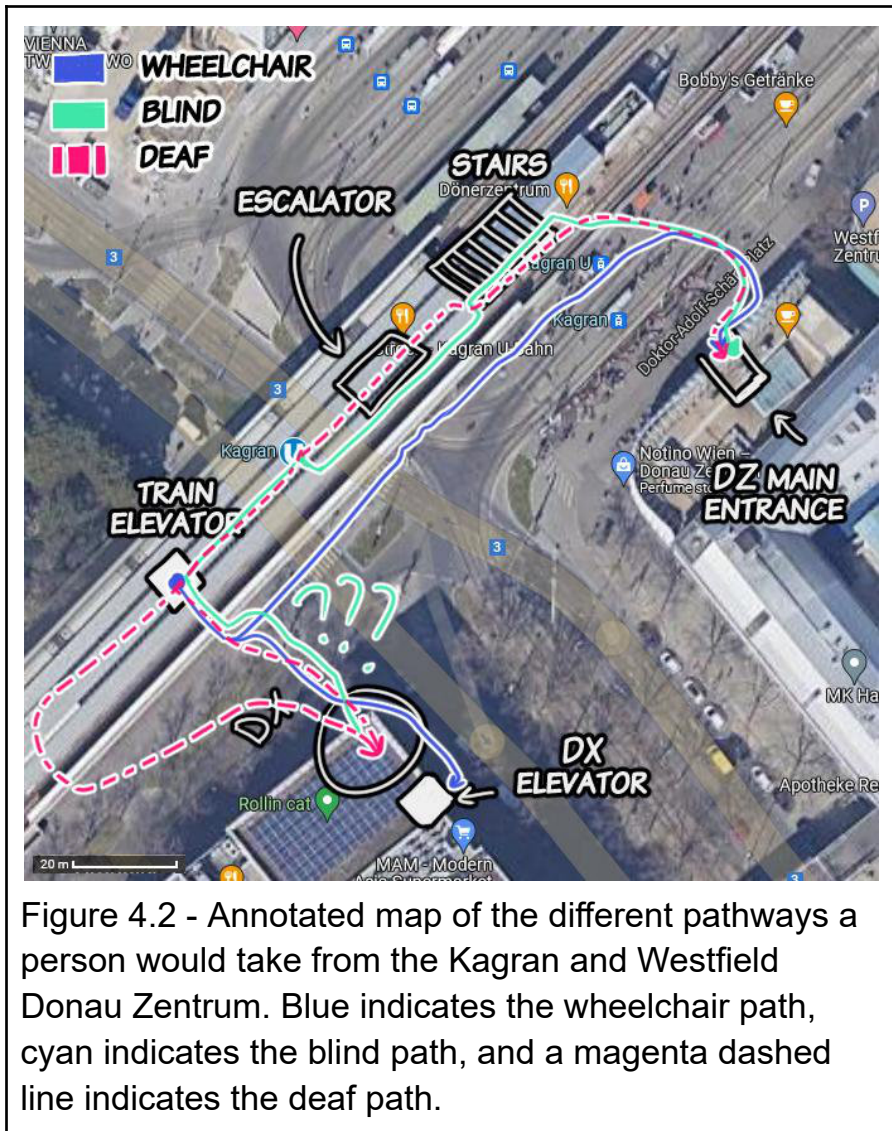
The VIC exit is only stairs. The elevator is on the other side, and so you have to do a more roundabout trip, if you were to use a wheelchair. The floor of the entrance outside the VIC is made of uneven tiles, making anything with wheels more difficult to manoeuvre. As a blind person with a white cane, if you follow the VIC exit, while the tactile pavement goes to the stairs, it stops at the bottom of the stairs. There are no tactile pavings at the exit floor. There are no tactile pavings taking you to the ticket machine, and none leading to the exit. If you do find the exit, there are no tactile pavings leading you to the entrance of the building, which is literally just a left turn. While you do not need your ears to navigate to the VIC, you will need an alternative form of communication when speaking with the guards at the front.

The Vienna International Centre is both welcoming and hostile at the same time. United Nations's commitments to disability's integration into Sustainable Development Goals contrasts with the VIC as a building. In a way, there is a type of politics that is presented, by combining what and whom the building represents and what and who can enter or interact with the building and the people in it. It creates the image of, "here you will find diverse workers with expertise who are in international relations with others", and also "only certain people can enter this building", and also "just use your eyes, and walk."

Another example of participation is how disabled people are not seen as potential consumers, only as

additional consumers, unless the product or place is targeted to them. This is not in relation to inclusive design, this is about not having the minimum infrastructure to facilitate access. Although disabled people make up a sizeable portion of the population and have strong spending power, disabled people are only represented in a fraction of advertising. With the internet amplifying underground voices, disabled people demand that they be seen.¹⁵ An example of this in a building would be shopping centres.

¹⁵ *Molly Burke Reviews: Blind Accessibility of Beauty Products | Universal Beauty | Allure*, 2021, https://www.youtube.com/watch?v=u2Xx_C5X9IM; *5 Things All Sighted People Should Know About Blindness!*, 2021, <https://www.youtube.com/watch?v=GOvqmBAwV34>.



The Westfield Donau Zentrum has accessible entrances, both in the front by the Kagan Underground Train and by the, at the time, District Administration Office. That being said, the elevator for the Kagan

Underground is not near any of those accessible entrances. It is, in fact, in front of the DonauPlex entrance, which has an elevator on the side. To get to the main entrance would require crossing three roads, where two are regulated, and one is a set of tram rails. Additionally, the elevators inside the Donau Zentrum are placed either next to stairs especially close to the entrances like the parking houses and the Ärztezentrum (Health Centre) or next to some escalators as shown in Figure 4.3.

Another example is the Westfield Shopping Center Süd, where the escalator and elevators are either together at the same place or relatively close together as shown in Figure 4.4. The accessible toilets however require a key, which you can get at one of the information desks, but the standard toilets for men and women are abundant, even including children doors. Whether the architects did not think about disabled people I cannot say for certain, but it is clear that this shopping centre targets families and other big groups of people as primary consumers, which also meant that people who pushed baby carriages would need accommodations. This leads to design primarily focused on baby carriages that also happen to include and accommodate wheelchairs. That being said, the accessible toilets require a key, which you get from the front desk to use after depositing your ID.¹⁶

¹⁶ 'Toiletten WESTFIELD SHOPPING CITY SÜD', accessed 5 April 2023, <https://www.westfield.com/austria/scs/services-detail/toiletten>.



Figure 4.3 - Map of Inside Donau Zentrum. Elevators and Stairs pair are circled.



Products are also another aspect of the discussion that needs to be addressed. When deciding whether a product should exist or not, bias such as implicit ableism for example say that certain bodies are deemed less valid target audiences unless they are targeted specifically. When a product is advertised for a person with a specific impairment, disabled people and non-disabled people are treated as mutually exclusive groups, and does not consider the possibility that a non-disabled person could use it. The clients who tend to buy disability aids are institutional such as hospitals, and as such would want the cheapest, utilitarian, bulk-order products and as such, aesthetics do not matter as much.¹⁷ The idea that being disabled, or ill in general, means that you do not inherently deserve pleasure or comfort, is only pain, should stay invisible, and/or are exempt from privileges bleeds into how we design goods and services.

Ash and I had an expectation that libraries, an institution that should be accessible to anyone and everyone, would include people who use wheelchairs. I did not want to think about the possibility that it could be

¹⁷ Ingri Ørsal Skogsrød, 'Empathy and Aesthetics: Combating Stigma in the Design of Assistive Products', accessed 8 February 2022, <https://www.ntnu.no/documents/10401/1264435841/Artikkel+Ingri+Orsal+Skogsr%C3%B8d.pdf/bfedd2cd-d9a2-41af-bb90-52deae0816d4>; *Why Are Disability Products so #\$\$&%*! Ugly?*, 2019, <https://www.youtube.com/watch?v=8yuSEeGaQaw>; Hannah Shewan Stevens, 'I Accessorised My Way To Embracing Disability', *Refinery29*, 14 February 2021, <https://www.refinery29.com/en-gb/stylish-mobility-aids-disability-fashion>.

different, but Ash's experience has taught them otherwise. For wheelchair-users like them, this is generally not an uncommon experience.¹⁸ Had they checked more thoroughly before going to the library at Vorgartenstrasse, they would be informed about the transparency of their accessibility. There was no general accessibility page, nor an accessibility statement, something that Kyle struggled with.

Kyle

The library is the one of few locations in which you can use their basic facilities without an expectation of payment. You can read the books there at the location, use their wifi, use their computer, etc, without payment. There are however some barriers though: when I was researching this, I assumed that obtaining a Stadt Wien library card would be free overall or at a cheaper price for disabled people as this was the case in some other libraries of the world. Library cards tend to come with the condition that you either work, live, or study at that location, and you have a limited amount of items you can borrow or you pay a fee for each item you borrow. The Seattle Public Libraries in the United States, Minato City

¹⁸ Andrea Mazzarino, 'Barriers Everywhere', *Human Rights Watch*, 11 September 2013, <https://www.hrw.org/report/2013/09/11/barriers-everywhere/lack-accessibility-people-disabilities-russia>; Raquel Velho, 'Transport Accessibility for Wheelchair Users: A Qualitative Analysis of Inclusion and Health', *International Journal of Transportation Science and Technology* 8, no. 2 (1 June 2019): 103–15, <https://doi.org/10.1016/j.ijtst.2018.04.005>.

Libraries in Tokyo, the Munich City Libraries in Germany, and London Public Libraries in the United Kingdom have these requirements, where it is free to get a card for Seattle, London, and Minato City, and Munich City Library cards have a discounted 10 EUR per year for disabled people, amongst other people.¹⁹

Sometimes this is not always the case. If you do not live in London, you pay a flat rate of 50 USD per year for the entire household. For Cape Town Public Library in South Africa, proof of address and ID is only needed. If you study there or are a permanent resident, the card is free. It is otherwise minimum 300 Rand (approx. 15.5 EUR) for 3 books and periodicals. China's Capital Library in Beijing asks only for proof of ID and a 25 yuan (approx. 3.5 EUR) deposit fee for 5 general Chinese books, 5 journals, 5 materials with the book, and 2 audiovisual disks for disabled people, seniors, officers, and for teenagers aged 13 and above. Delhi Public Library in Old Delhi India has a flat 100 INR annual fee (approx. 1.5 EUR) and a 25 INR annual fee (approx. 0.3 EUR) if you have a Below Poverty Line card. The membership then needs to be attested "any responsible person (such as

¹⁹ 'Minato City Library | Q&A', accessed 11 January 2023, <https://www.lib.city.minato.tokyo.jp/e/guide6.html>; 'Library Card Application', accessed 14 March 2023, <https://www.spl.org/using-the-library/get-started/get-started-in-english/en-get-started-with-a-library-card/en-library-card-application>; 'anmelden & ausleihen', accessed 14 March 2023, <https://muenchner-stadtbibliothek.de/anmelden-ausleihen>; 'Library Cards | London Public Library', accessed 14 March 2023, <https://www.londonpubliclibrary.ca/about-my-library/borrowing-items/library-cards>.

Gazetted officers/Principal/Lecturer/Elected Public Representative/MBBS Doctor/Lawyer/Bank Manager/President/ Secretary of any Residents Welfare Association/any Officer of Semi Govt. or Public Undertaking equivalent to the Gazetted Officers etc.)". If not, they pay a 3000 INR (approx. 34 EUR) refundable security deposit fee. The Tokyo Metropolitan Library has no borrowing system but does have a photocopying service for only the items inside the library.²⁰

From what I gather, the big factors for the cost of a library card are taxes (if they pay tax); their participation potential for the library such as but not limited to being a student, a senior citizen, army officers/veterans, or a child; and their financial state. In this journey, I was not only surprised by how a disability ID does not grant a discount, but how the eligibility for lower prices is closely tied to household income.²¹ The *Kulturpass* requires that you live below the poverty line despite taking pension,

²⁰ 'City of Cape Town Link', City of Cape Town, accessed 14 March 2023, <https://www.capetown.gov.za/City-connect/Register/Information-and-learning/Register-for-a-City-library-membership>; 'Visit_Capital Library of China', accessed 14 March 2023, <https://www.clcn.net.cn/en/visit/8.html>; 'Visit_Capital Library of China', accessed 14 March 2023, <https://www.clcn.net.cn/en/visit/2.html>; 'Mission Statement', accessed 14 March 2023, <https://dpl.gov.in/membership.php>; 'Central Library', Tokyo Metropolitan Library, accessed 14 March 2023, https://www.library.metro.tokyo.lg.jp/english/central_library/.

²¹ 'Stadt Wien - Büchereien > Büchereien Wien > Benutzung > Gebühren', accessed 23 November 2022, <https://buechereien.wien.gv.at/B%C3%BCchereien-Wien/Benutzung/Geb%C3%BChren>.

being self-employed, or on social aid;²² and the *Mobilpass* asks if you take social aid or rent allowance, or your entire household income does not exceed the minimum standard.²³ This information that can be found by navigating to *Gebühren* (Pricing) under the *Benutzung* (Use) navigation menu.

²² AMS Landes, 'Wer muss Wohin? – Für Menschen, die armutsgefährdet sind', n.d., 1; 'Wer hat Anspruch? | Hunger auf Kunst und Kultur', accessed 23 November 2022,

https://www.hungeraufkunstundkultur.at/wien/wer_hat_anspruch.

²³ Stadt Wien, Soziales, Sozial- und Gesundheitsrecht, 'Mobilpass beantragen', accessed 23 November 2022,

<https://www.wien.gv.at/amtshelfer/gesundheit/gesundheitsrecht/ausweise/mobilpass.html>.

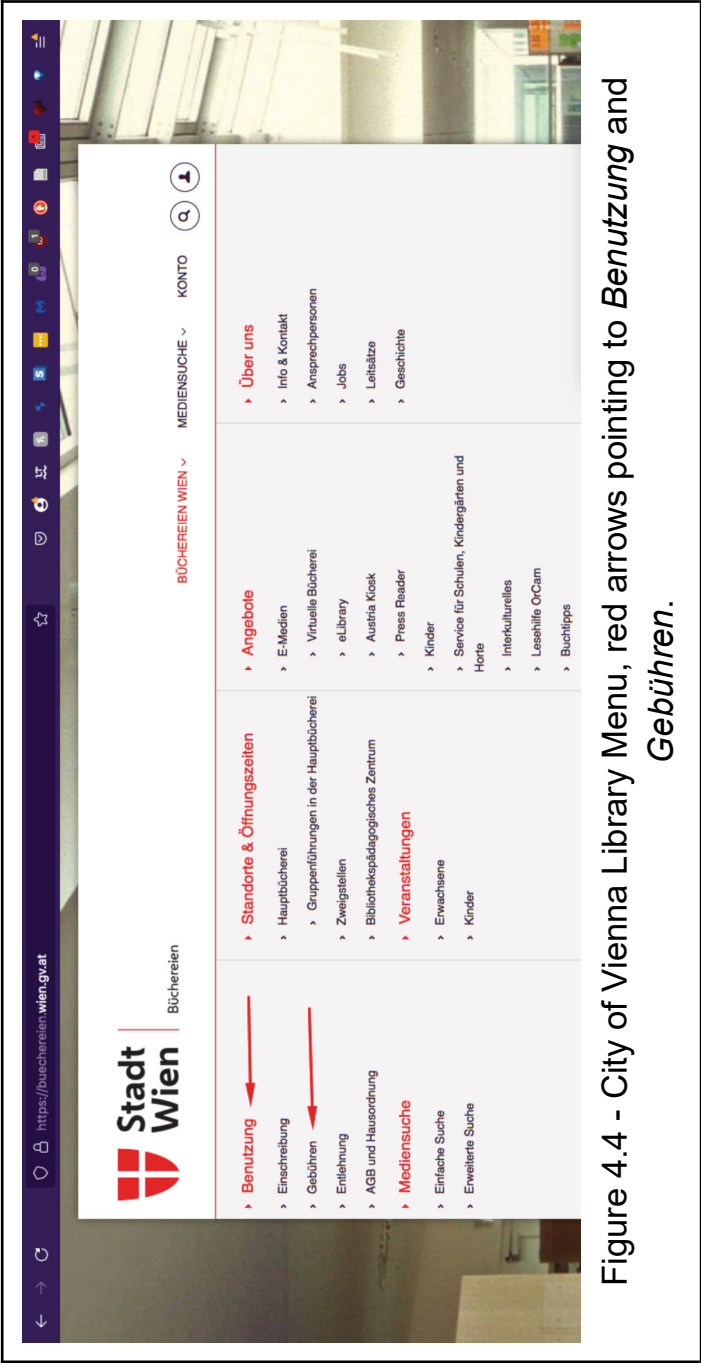


Figure 4.4 - City of Vienna Library Menu, red arrows pointing to *Benutzung* and *Gebühren*.

		https://buschereien.wien.gv.at/Büchereien-Wien/Benutzung/Gebühren	
Bücherleihen	Büchereien	Jugendkulturstaatsbibliothek	Konto
Neue Büchereikarte	5,70	bei Verlust oder Diebstahl der Büchereikarte	
Bearbeitungsgebühr	1,70	beim Ersatz verlorener Medien	
Gebühr für Adressermittlung	4,50	Wenn im Mahnfall eine Adressermittlung erfolgen muss	
Computerausdruck A4	0,20		
Bestellerg Gebühr	2,90	Bestellerservice in der Hauptbücherei	
Anspruch auf ermäßigte Jahresgebühr			
Berechtigte Gruppen	Nachweis		
SchülerInnen, Lehrlinge, Studierende	SchülerInnenausweis, Schulbesuchsbestätigung, Leihfahrschein, StudentInnenausweis, Studienbuch mit Inskriptionsbestätigung, nach dem 24. Geburtsstag Bestätigung über Bezug der Familienbeihilfe (bis zum 25. Geburtsstag)		
Zivil- und Präsenzieller Einkommen	Zivildienstausweis, Wehrdienstbuch und -ausweis		
Pflichterwerbende	Mobilpass oder Kulturpass		

113

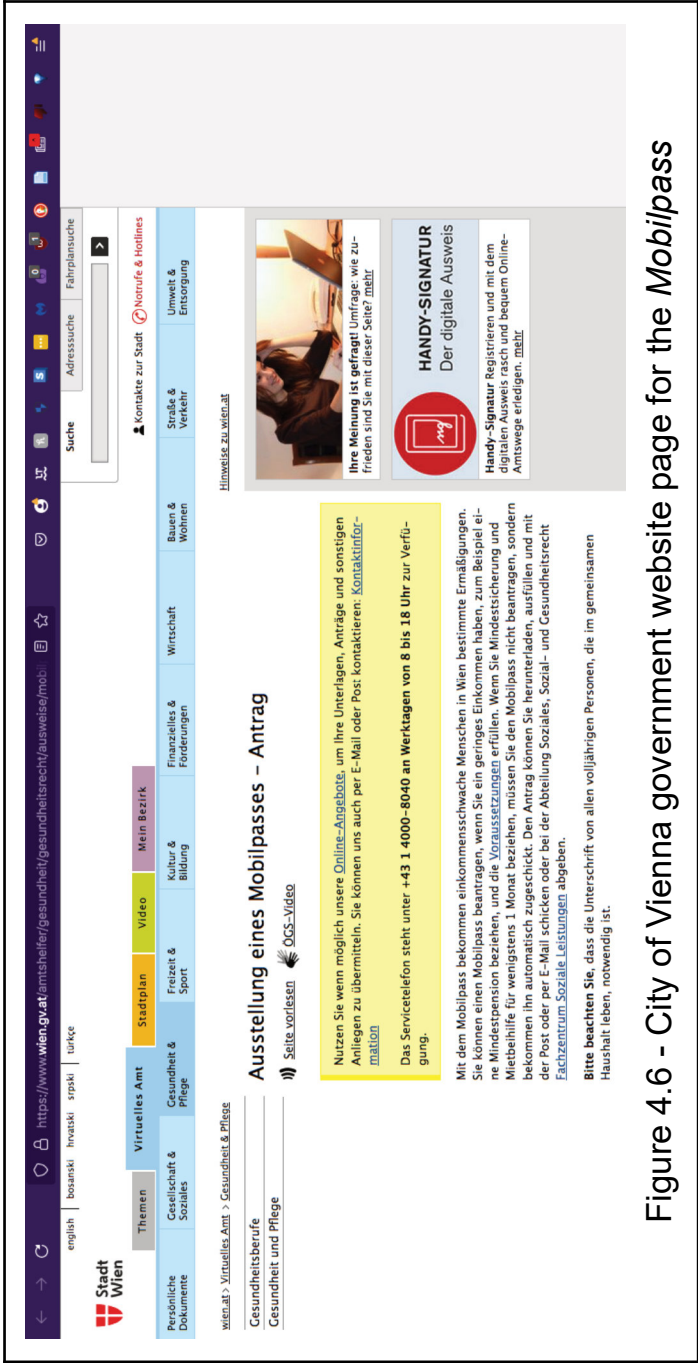


Figure 4.6 – City of Vienna government website page for the Mobilpass

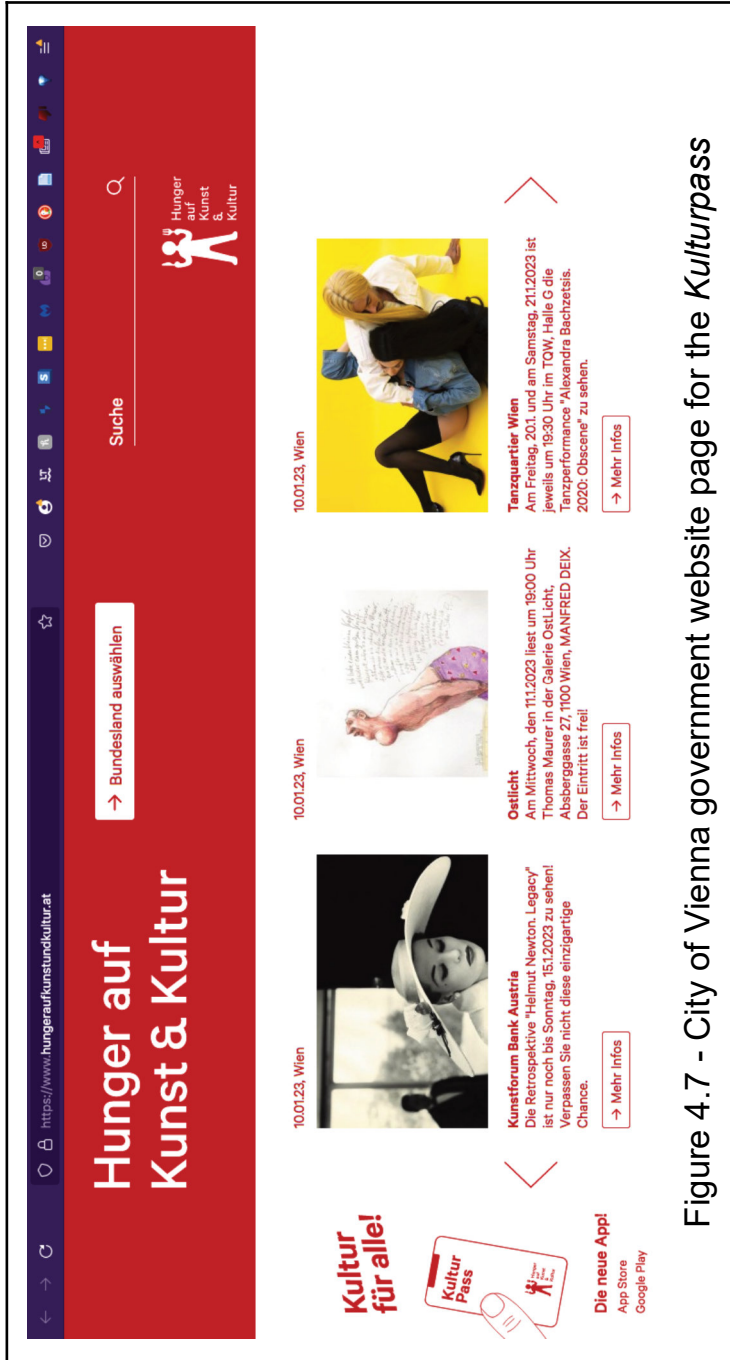


Figure 4.7 - City of Vienna government website page for the *Kulturpass*

The accessibility services in the *Stadt Wien* Libraries are not clearly spelled out, as I demonstrated with Kyle. Website accessibility has the benefit of far simpler management and is by far the easiest to mitigate. Information about wheelchair-accessibility is placed on individual library pages, which is important and makes sense to mention. You also see this in the Munich Libraries in Germany. Additionally when you look at the individual locations of the libraries, information about Accessibility was open by default. They also link to a general website about experiencing culture in Munich in an accessible way.²⁴

²⁴ 'Stadtbibliothek Neuhausen - Münchner Stadtbibliothek', accessed 10 January 2023, <https://muenchner-stadtbibliothek.de/stadtbibliothek-neuhausen>.

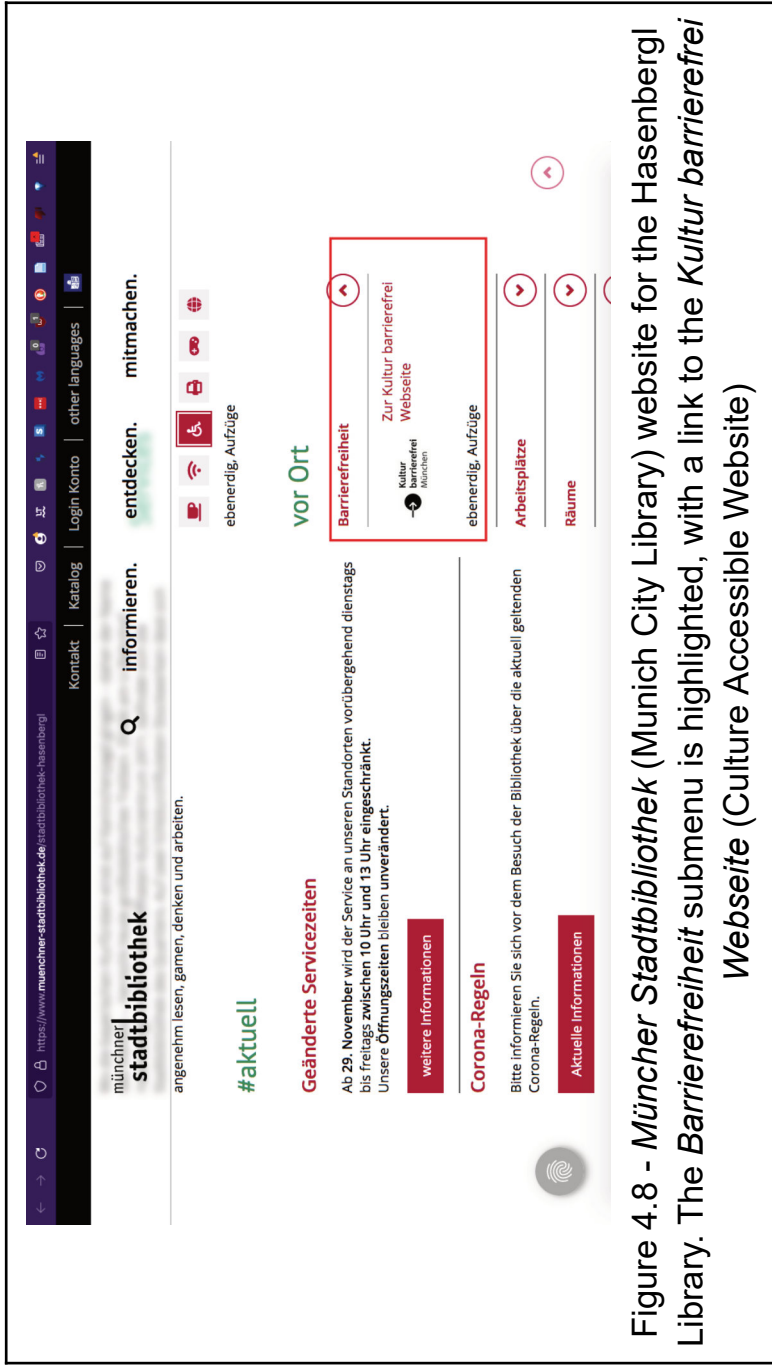


Figure 4.8 - *Münchner Stadtbibliothek* (Munich City Library) website for the Hasenberg Library. The *Barrierefreiheit* subpage is highlighted, with a link to the *Kultur barrierefrei* Webseite (Culture Accessible Website)

As mentioned in the example, information about accessibility of a website or place is typically found at the bottom of the website as a footer, or is listed in the various sitemaps, which the *Stadt Wien* library pages does not have. Having OrCam as a link in the *Angebote* submenu makes sense, but if someone has never heard of it before, they are less likely to find that page.

An example of clear information about accessibility would be the website for the Metropolitan Libraries in Tokyo. After switching the language to English, under Language shown here in Figure 4.9-10.



Figure 4.9 - Tokyo Metropolitan Library, in Japanese, cropped, and a red arrow pointing to Language on the top header.

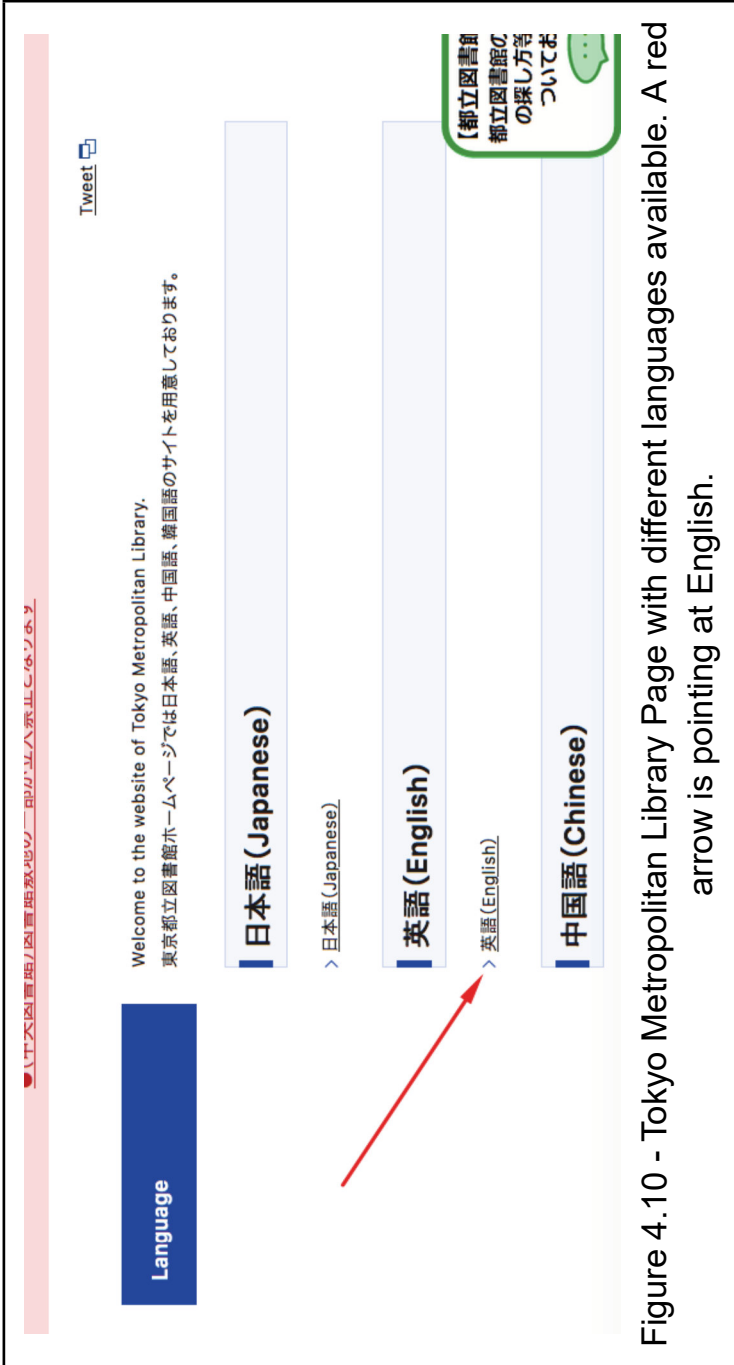


Figure 4.10 - Tokyo Metropolitan Library Page with different languages available. A red arrow is pointing at English.

You are brought to this main page. You click on *How to Use* as shown in Figure 4.11.

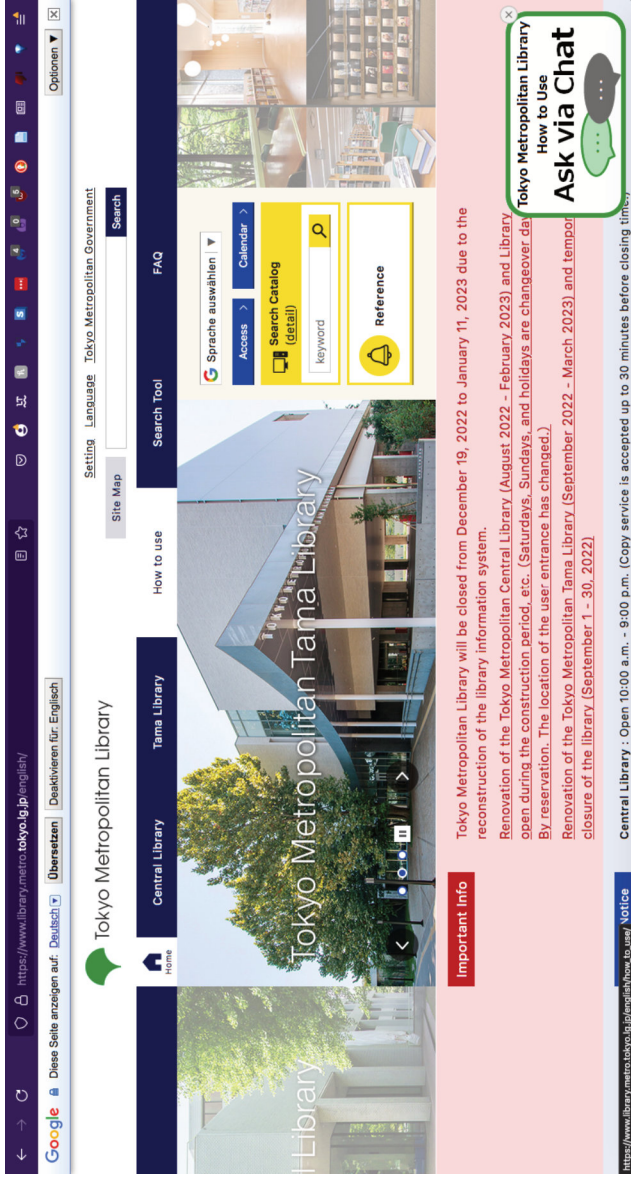


Figure 4.11 - Tokyo Metropolitan Library, in English. The “How to Use” button is highlighted.

Which opens up this page. And directly under, you see *Support for the disabled*, as shown in Figure 4.12.

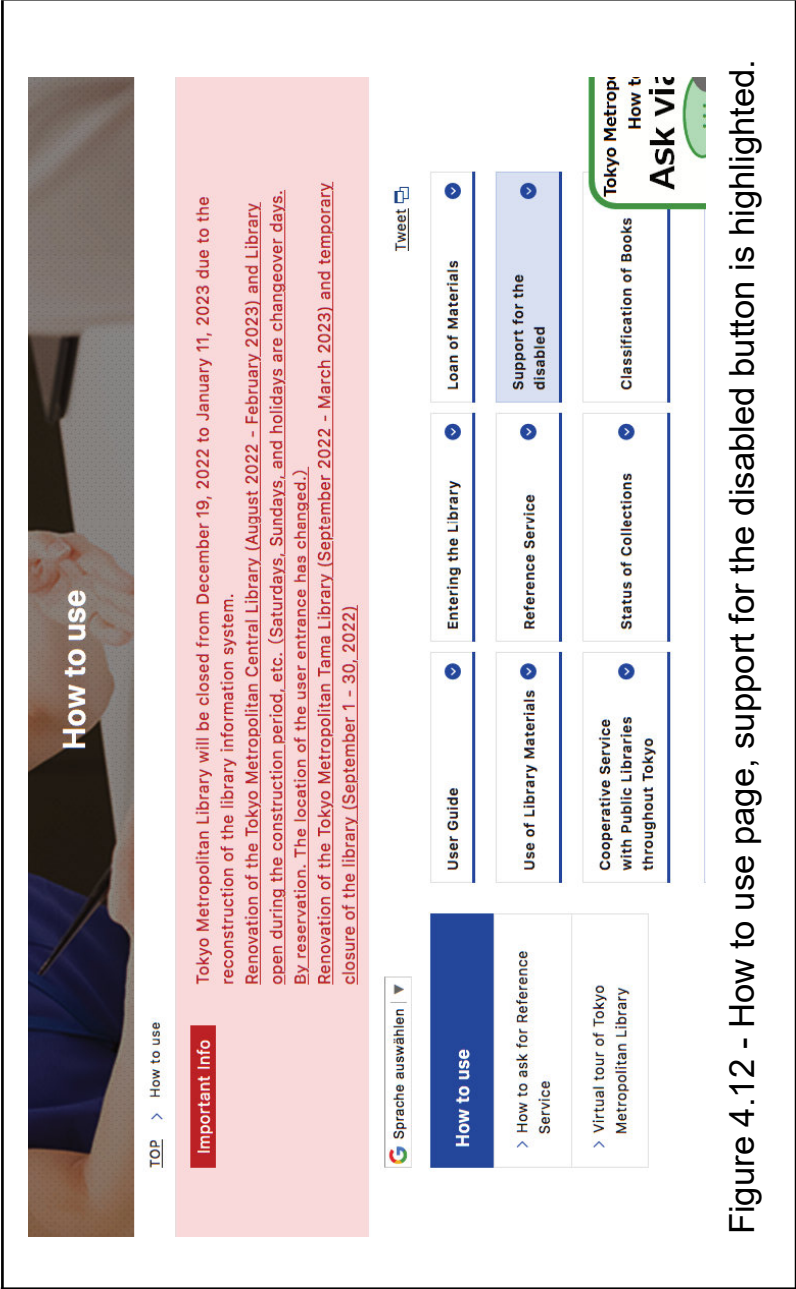


Figure 4.12 - How to use page, support for the disabled button is highlighted.

Clicking on it drags you down to that section in the page.

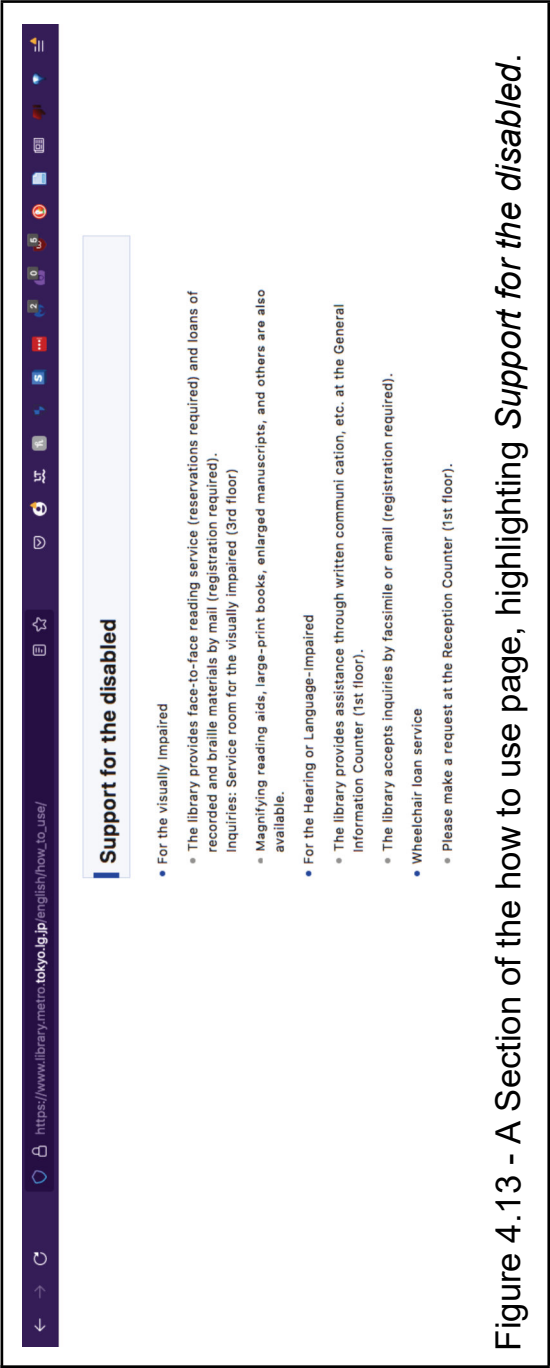


Figure 4.13 - A Section of the how to use page, highlighting *Support for the disabled*.

While it does not have an accessibility statement, finding services for disabled people is easy to find. Additionally, the website informs disabled people of services that the library provides, such as a wheelchair loan-service, visual aids such as magnifying glasses, face-to-face service, loaning of recording and braille material, and written communication, though they require prior registration.²⁵ This is prominent, important information that is accessible and on the same page as the *How to Use* page and sends a message that *users* includes disabled people. This library is not the only one in Tokyo. Tokyo, a large, dense city with other districts and wards, has libraries in the Minato Ward for example. There is a website dedicated to all of them but no disability access information.²⁶

When I compare how Vienna, Munich, and Tokyo view its libraries, the one main, critical component that I pick up is the spectrum of the library's integration and its inclusion into the fabric of its city, therefore its impact on its citizens. The way the Munich Library websites integrate accessibility shows that disabled people are included in experiencing culture, **and** that the Munich city libraries are considered as cultural experiences.²⁷

²⁵ Tokyo Metropolitan Library, 'How to Use', Government Website, Tokyo Metropolitan Library, accessed 6 December 2022, https://www.library.metro.tokyo.lg.jp/english/how_to_use/.

²⁶ 'Minato City Library | Site Map', accessed 15 December 2022, <https://www.lib.city.minato.tokyo.jp/e/sitemap.html>.

²⁷ 'Kultur barrierefrei München – Kultur barrierefrei München', accessed 10 January 2023, <https://www.kultur-barrierefrei-muenchen.de/>.

Additionally, when finding it on their city portal, the city libraries are categorised under *Leben* (Living) while in the *Stadt Wien* website, it is under the *Bildung und Forschung* (Education and Research) tab.²⁸ The *Stadt Wien* website says libraries are a gateway for education, culture, and entertainment, but the general library website is self-contained to its services only.²⁹ There is a page for living as a disabled person, which includes information about work, education, and accessible renovation of buildings, to name a few, under *Gesundheit und Soziales* (Health and Social Affairs), but the library is not linked as a service or place for disabled people.³⁰ Libraries that cater towards disabled people and others on social relief are not on the *Stadt Wien* website, but the *Fondes Sozialinfo Wien* (Social Info Fund) website, where they will tell you about those libraries. A search for “bucherei” even without umlaut directs you to a list of libraries for those who cannot visit one, as shown in Figure 4.14.³¹

²⁸ Stadt Wien Büchereien, ‘Übersicht der Büchereien - Städtische Bibliotheken’, accessed 11 January 2023, <https://www.wien.gv.at/bildung/buechereien/>; muenchen.de, ‘Münchner Stadtbibliothek: Angebot, Programm, Ausleihe - muenchen.de’, accessed 5 March 2023,

<https://www.muenchen.de/leben/bibliotheken/muenchner-stadtbibliothek>.

²⁹ ‘Stadt Wien - Büchereien > Büchereien Wien’, accessed 11 January 2023, <https://buechereien.wien.gv.at/>.

³⁰ Stadt Wien, ‘Übersicht - Leben mit Behinderung’, accessed 10 January 2023, <https://www.wien.gv.at/menschen/behinderungen/index.html>.

³¹ ‘Thema “Büchereien” - Sozialinfo Wien’, accessed 10 January 2023, <https://sozialinfo.wien.at/content/de/10/SearchResults.do?keyword=B%C3%BCchereien&liid=8>.

The screenshot displays the 'Sozialinfo Wien' website. At the top, there's a navigation bar with a search bar containing 'bücherei'. Below the search bar, the results for 'Thema "Büchereien"' are shown, including a description and a map of Vienna with library locations marked. The bottom of the page has a sidebar with various categories and a list of search results.

Navigation Bar:

- Suche
- Infoblätter
- Begriffe übersetzen
- Über uns

Search Results:

- Thema "Büchereien"**
Leihbibliotheken und Zustelldienst für Menschen, die eine Bücherei nicht aufsuchen können

Map: A map of Vienna showing library locations marked with green dots. The map includes labels for various districts and streets.

Bottom Sidebar:

- Stichwörter von A bis Z
- Alter
- Arbeit
- Behinderung
- Bildung
- Familie
- Frauen
- Freizeit und Kultur
- Geld und materielle Lebensgrundlagen
- Gesundheit
- Internationale Zusammenarbeit und kulturelle Vielfalt
- Kindheit und Jugend
- Konflikte und Gewalt
- Männer
- Migration und Integration
- Not, KundInnen- und

It must be duly noted that the *Stadt Wien* libraries are not the only libraries, but those are the ones that situate themselves as part of daily life, despite what the city of Vienna government website implies. The other library such as the *Wienbibliothek im Rathaus* (Vienna Library in Council House) is found under Culture and Leisure in the city of Vienna website, as shown in Figure 4.15.



Figure 4.15 - *Stadt Wien* website for *Wienbibliothek*

Another example of a library as part of the culture like with Munich, is how the Tokyo Metropolitan City Government website categorises the Metropolitan Library

in the same category as tourism and culture but not education, and it is considered as a *Thing to Do*.³² In contrast, the Minato City website only files libraries under education.³³ While it is open to everyone, membership for the Minato City Library requires that you live, work, or study in the cities of Tokyo, and you do not find information about its accessibility.³⁴

Munich and Metropolitan Tokyo see their library as a cultural and sometimes touristic component of the fabric of their cities. Munich wholly includes their libraries as places disabled people can go to, where Vienna and Minato City Tokyo sees their libraries as an education hub first, and cultural place second. Kyle would not feel comfortable in the Minato City Ward libraries, and would feel more comfortable finding information at the Munich and Tokyo Metropolitan Library websites. Information is important but accessibility is not only in their services but also the media and content they provide, a case for Sarah.

³² 'Things To Do', Tokyo Metropolitan Government, accessed 11 January 2023, <https://www.metro.tokyo.lg.jp/english/things/index.html>; 'Tourism, Culture and Sports', Tokyo Metropolitan Government, accessed 11 January 2023, <https://www.metro.tokyo.lg.jp/english/directory/tourism.html>.

³³ Minato City, 'Library', Minato City, accessed 11 January 2023, <https://www.city.minato.tokyo.jp/kodomo/toshokan/index.html>.

³⁴ 'Minato City Library | Q&A'.

Sarah

The library is not just a location, it is a symbol of culture and community. The destruction of a library has severe implications on human history, heritage, and tradition, to name a few. The metaphor of the burning of the Library of Alexandria is a reminder of the impact of lost knowledge and culture on society.³⁵ In fact, a modern equivalent of this would be the Z-Library, a digital repository of articles, books, and journals used mostly by students for resources that are otherwise inaccessible, being seized by the US government on 4th November 2022³⁶. While the Internet Archive was able to successfully argue their position as a fair use cite against a lawsuit of four publishers³⁷, the application of copyright exemptions is grey and not without reason.

While the EU Directive has accessibility for disabled people as an exemption when it comes to copyright³⁸, the existence of the Marrakesh Treaty to make books and

³⁵ 'The Burning of the Library of Alexandria | EHISTORY', accessed 14 March 2023, <https://ehistory.osu.edu/articles/burning-library-alexandria>.

³⁶ Sahana Venugopal, 'Digital Database Z-Library's Domains Seized by the FBI', *The Hindu*, 5 November 2022, sec. Technology, <https://www.thehindu.com/sci-tech/technology/digital-database-z-library-domains-seized-us-fbi-books-academic-papers-piracy-doj-new-york-zlib-tiktok/article66099132.ece>.

³⁷ Lila Bailey, 'Internet Archive Files Final Reply Brief in Lawsuit Defending Controlled Digital Lending', *Internet Archive Blogs* (blog), 8 October 2022, <https://blog.archive.org/2022/10/08/internet-archive-files-final-reply-brief-in-lawsuit-defending-controlled-digital-lending/>.

³⁸ 'Legislation', *Official Journal of the European Union*, Official Journal of the European Union, 62 (17 May 2019): 132.

media accessible to print-disabled people³⁹, to which the European Union's Treaty is a contracting Party⁴⁰, and its need to be written and implemented can imply that the relationship between the inclusion of accessibility and rights to media is not implicit.

Additionally, with the sheer abundance of data and media being uploaded to the Internet per second, controlling for its copyright legality has been relegated to algorithms and bots, which cannot distinguish whether its media is in fair use or not. This is where a human would come in to look at it. YouTube's Content ID System is a direct example of this; it already protects owners of copyright material, but it pits the person being struck with the direct owner of the material, who, if it was a giant company like Universal Music Groups, will often reject the appeal.⁴¹ The good news is that there is precedence to this system, being the case of *Lenz vs Universal Music Group*, where Circuit Judge Tallman writes in his opinion:

“[Lenz] claim boils down to a question of whether copyright holders [UMG] have been abusing the extrajudicial takedown procedures

³⁹ World Intellectual Property Organization, ed., *Main Provisions and Benefits of the Marrakesh Treaty (2013)* (Geneva, Switzerland: World Intellectual Property Organization (WIPO), 2016), <https://doi.org/10.34667/tind.28932>.

⁴⁰ Hope Lewis, 'Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled', *International Legal Materials* 52, no. 6 (December 2013): 1309–20, <https://doi.org/10.5305/intelegamate.52.6.1309>.

⁴¹ *What I Want to Teach, but Can't, Thanks to Universal Music Group.*, 2017, <https://www.youtube.com/watch?v=nryFmUjtWEY>.

provided for in the DMCA by declining to first evaluate whether the content qualifies as fair use. We hold that the statute requires copyright holders to consider fair use before sending a takedown notification, and that failure to do so raises a triable issue as to whether the copyright holder formed a subjective good faith belief that the use was not authorized by law.”⁴²

Jeffrey Garret’s review article, *Why Burn a Library?* highlights the large historical precedence that burning a library, in that also book burning, is a strategic practice in not just de-nationalisation, but also cultural humiliation.⁴³ While there are different ways knowledge can be passed on, such as through oral tradition,⁴⁴ the destruction of knowledge in physical form is devastating. Additionally, people go to the library for functions outside looking through their collection. The library currently serves as a

⁴² Lenz v. Universal Music Corp., 801 F. 3d 1126 (Court of Appeals, 9th Circuit 2015).

⁴³ Jeffrey Garrett, ‘Why Burn a Library?’, ed. Lucien X. Polastron et al., *The Library Quarterly: Information, Community, Policy* 79, no. 4 (2009): 489–93, <https://doi.org/10.1086/605386>.

⁴⁴ Ananya Aditya, ‘Observing Oral Tradition in Indigenous Communities - The Medium’, 18 October 2021, <https://themedium.ca/observing-oral-tradition-in-indigenous-communities/>, <https://themedium.ca/observing-oral-tradition-in-indigenous-communities/>; Caroline Long, ‘Storytelling Is Vital to Many Indigenous Cultures, but Preserving Oral Traditions Can Be Challenging’, UPR Utah Public Radio, 29 October 2021, <https://www.upr.org/utah-news/2021-10-29/storytelling-is-vital-to-many-indigenous-cultures-but-preserving-oral-traditions-can-be-challenging>.

meeting place, a venue, and shelter in times of crisis.⁴⁵ There is not only a legal limitation through various implicit assumptions (whether these are brought out through bias or not is another entirely highly nuanced question), there is also a technical limitation to the access of media and libraries.

The library, and all other repositories, is an especially unique institution and place because the progression of its life is directly related to the humans that interact with it. After all, a school is a group of fish, and a parliament is a group of owls. To be fair, there is always a hoot going on there. How the environment interacts with the concrete buildings and the objects inside is related to how they are used to create life. Fibres in paper start to break with oxidation, humidity creates spots in the paper and moulds, and leather flakes and becomes powder.⁴⁶ Wood rots, drywall dissolves, and stone weathers and

⁴⁵ John B. Horrigan, 'Libraries 2016', *Pew Research Center: Internet, Science & Tech* (blog), 9 September 2016, <https://www.pewresearch.org/internet/2016/09/09/libraries-2016/>; 1615 L. St NW, Suite 800 Washington, and DC 20036 USA 202-419-4300 | Main 202-857-8562 | Fax 202-419-4372 | Media Inquiries, 'Part 2: What People Do at Libraries and Library Websites', *Pew Research Center: Internet, Science & Tech* (blog), 22 January 2013, <https://www.pewresearch.org/internet/2013/01/22/part-2-what-people-do-at-libraries-and-library-websites/>; Grace Morris, 'Public Libraries Can (Literally) Serve as a Shelter from the Storm', *The Conversation*, accessed 19 October 2022, <http://theconversation.com/public-libraries-can-literally-serve-as-a-shelter-from-the-storm-83070>.

⁴⁶ 'Common Forms of Book Decay Found on Bookshelves', *University Libraries*, 29 April 2021, <https://www.colorado.edu/libraries/2021/04/29/common-forms-book-decay-found-bookshelves>.

erodes, creating conditions for mould, fungi, and other organisms to survive and thrive.⁴⁷ For digital data, discs become unreadable with oxidation and the protective layer peeling off.⁴⁸ According to humans, the place nature could have in a library is for aesthetic and utilitarian purposes, such as decor for the library and air circulation. Their need for natural light and air also prevents a cold and stale atmosphere and contributes to a more positive mood of the people inside.⁴⁹ However, evapotranspiration from plants can increase humidity levels, causing adverse effects on the books.⁵⁰ While plants and animals carry data, a centralised structure of knowledge organised in a

⁴⁷ Lina Nunes and Helena Cruz, 'Fungal Degradation of Wood in Buildings', 2003, 84–93, <https://doi.org/10.1617/2351580184.009>; Dario Camuffo, 'Physical Weathering of Stones', *Science of The Total Environment*, The Deterioration of Monuments, 167, no. 1 (1 May 1995): 1–14, [https://doi.org/10.1016/0048-9697\(95\)04565-1](https://doi.org/10.1016/0048-9697(95)04565-1); Sandra Dedesko and Jeffrey A. Siegel, 'Moisture Parameters and Fungal Communities Associated with Gypsum Drywall in Buildings', *Microbiome* 3, no. 1 (8 December 2015): 71, <https://doi.org/10.1186/s40168-015-0137-y>.

⁴⁸ Ernie Smith, 'Disc Rot: What Happens When Discs Die', Tedium: The Dull Side of the Internet., 3 February 2017, <https://tedium.co/2017/02/02/disc-rot-phenomenon/>; L. David Lampson, 'Classical Net - Koussevitzky Recordings Society Journal - CD Bronzing', Classical Net, September 1995, <http://www.classical.net/music/guide/society/krs/excerpt3.php>.

⁴⁹ Roger Ulrich, 'Health Benefits of Gardens in Hospitals' (Plants for People, Center for Health Systems and Design Colleges of Architecture and Medicine Texas A & M University College State, TX 77843, 2002); Brenda Dalglish, 'Bio-Wall at College Library More than "Pretty Plants"', *The Globe and Mail*, 20 August 2012, <https://www.theglobeandmail.com/report-on-business/industry-news/property-report/bio-wall-at-college-library-more-than-pretty-plants/article4490142/>.

⁵⁰ Rachel Kreutzinger, James R. Irons, and Matthew Radcliffe, 'NASA Scientific Visualization Studio - Evaporation and Transpiration', Scientific Visualization Studio, 8 March 2012, <https://svs.gsfc.nasa.gov/10926>.

systematic order with the specific purpose of finding and preserving said knowledge is not something that exists in nature. That is not to say that nature does not experience “knowledge creation” or “knowledge destruction”, it is its externalisation that is unique to humans. Crows have not been observed reading books but they do have knowledge on which one of us has the peanuts and which one is mean, and will pass that information down through generations.⁵¹ While scientists create the means to make spinach transfer its environmental data through email⁵², it will not be about how they have feelings for me. To be fair, I eat them, so I may not have given them a chance to. The point is, the creation and destruction of knowledge has a specific human-context that bears no meaning to the natural environment.

So why does any of this matter for someone like Sarah? Sarah does not have a disability related to processing print, she can find books by herself, and ultimately is just learning a language. She is, by all intents and purposes, in a temporary state that will change through work. Yet, she feels shame and anxiety. She struggles in a way that is personal, and while the source is coming from a different place, this struggle is

⁵¹ Heather N. Cornell, John M. Marzluff, and Shannon Pecoraro, ‘Social Learning Spreads Knowledge about Dangerous Humans among American Crows’, *Proceedings of the Royal Society B: Biological Sciences* 279, no. 1728 (29 June 2011): 499–508, <https://doi.org/10.1098/rspb.2011.0957>.

⁵² Min Hao Wong et al., ‘Nitroaromatic Detection and Infrared Communication from Wild-Type Plants Using Plant Nanobionics’, *Nature Materials* 16, no. 2 (February 2017): 264–72,

something that is ultimately shared by anyone and everyone who cannot read well or at all. Zoe Bee notes in her video focusing on illiteracy, that even in progressive spaces, discrimination still happens and can be expressed through ableist and classist language.⁵³ In fact, in an OECD study done in 2013 for Austria, it was found that about a million adults cannot or barely read.⁵⁴ While disability can make learning literacy difficult, it is not the deciding factor. The majority of the causes of illiteracy are related to poverty and access to education. Depending on the circumstances, books can be a luxury, and the outcomes of illiteracy can extend to misunderstanding medication labels, not filling a governmental form correctly, and not pursuing further education altogether.⁵⁵ Libraries are therefore an extremely valuable resource as a space where people can read books and engage with the media without needing to spend money and judgement.⁵⁶

⁵³ *The Adults Who Can't Read*, 2021, https://www.youtube.com/watch?v=xxMsgVgeu_M.

⁵⁴ 'Analphabetismus in Österreich | DI | 20 08 2019 | 15:30', *oe1.orf.at* (ORF, 20 August 2019), <https://oe1.orf.at/programm/20190820/561377/Analphabetismus-in-Oesterr-eich>.

⁵⁵ Darren A DeWalt et al., 'Literacy and Health Outcomes', *Journal of General Internal Medicine* 19, no. 12 (December 2004): 1228–39, <https://doi.org/10.1111/j.1525-1497.2004.40153.x>.

⁵⁶ UNESCO Institute for Lifelong Learning, 'Libraries and Literacy: Using Libraries to Support National Literacy Efforts - UIL Policy Brief 6 | UIL', 15 December 2016, <https://uil.unesco.org/literacy/libraries-and-literacy-using-libraries-support-national-literacy-efforts-uil-policy-brief-6>.

What could be considered as laziness or being emotionally fragile is actually a legitimate barrier that Sarah is facing. She was not in an explicitly hostile environment; she felt shame due to an implicit bias that is related to the expected path a person at her age **should** be on, especially since she has been working in a foreign country for some time. This narrative questions her autonomy and her ability to participate in society like an adult would, a feeling that many print-disabled people recognize all too well.

Summary

So what do Ash, Sarah, and Kyle have in common? They all faced an accessibility issue within a spectrum of disability: Ash has a permanent disability relating to their physical disability, Kyle has a temporary disability related to his sight, and Sarah has a situational disability related to communication and self-esteem.

Pixie also known as PacingPixie⁵⁷ on Instagram demonstrates these phenomena in the *Inaccessibility Cycle* as shown in Figure 4.16. Inaccessibility leads to disabled people being unable to participate. Through this disabled people become less visible in the public, which makes them seen as an outlier, which in turn justifies the notion that they do not need to be considered, which then ultimately leads to inaccessibility.

⁵⁷ Pixie, 'The Inaccessibility Cycle', Social Media, Instagram, 5 July 2021, https://www.instagram.com/p/CMFhW7QDrr_/.



Figure 4.16 - PacingPixie's Instagram image post showing the *Inaccessibility Cycle*

The effects of inaccessibility do not stop at disabled people. In fact, they all overlap with various other groups:

- Ash's inaccess is also a parent's inaccess especially if with a child carriage
- Kyle's inaccess is also an inaccess of a blind or elderly person
- Sarah's inaccess is also the inaccess of a print-disabled person, or a person in poverty.

By all means, Ash could just go to an accessible library, Kyle could just wait until his glasses are fixed (and perhaps also buy a spare!), and Sarah could learn German in other ways. At the same time, I cannot help assert that, *maybe*, libraries should be accessible because disabled people are part of the public. *Maybe*, information about accessibility accommodations should be stated clearly and be easy to find, especially for those who need them. And *maybe*, books for adults in various levels of German, which includes low levels, should be part of the catalogue. Their issues, depending on the circumstances, could be quite easy to solve. However, this frames accessibility as an “improved” or “second” version.

So, why is accessibility, a vital aspect of some people’s lives, an attachment and not inherent?

The Sustainability of Personal Hindsight

In the previous section, I highlighted how disintegration and exclusion can happen to anyone, even in a society that has accessible elements integrated. While Pixie is talking about the disabled community in the UK, this vicious cycle is present in Vienna, and I wanted to expand on this cycle with concrete examples of accessibility issues in Vienna and other places for comparison.

Disability is, in fact, not rare. “Globally, there are at least 1 billion people with disabilities, constituting 15% of the world’s population”⁵⁸ and in countries with a life expectancy of 70 or more, people on average spend 11.5% of their life with a disability.⁵⁹ The idea that accessibility is only for disabled people allows the perpetuation of irresponsibility and apathy towards not only disabled people, but also caretakers.

Caring for disabled people also means caring for everyone in the long-term, and is not something that has existed recently. Care for others has existed in our prehistoric ancestors and cousins. Healthcare was a low-cost and effective method of reducing mortality, and there is archaeological evidence that shows that Neanderthals with brain deformity, amputees, and the

⁵⁸ World Health Organization. Regional Office for Europe, ‘Policy Brief on Disability-Inclusive Health Systems’ (World Health Organization. Regional Office for Europe, 2021), <https://apps.who.int/iris/handle/10665/350143>.

⁵⁹ Disabled World, ‘Disability Statistics: Information, Charts, Graphs and Tables’, Disabled World, 9 February 2019, <https://www.disabled-world.com/disability/statistics/>.

elderly have lived longer than one would expect. This has been coined as the earliest form of compassion.⁶⁰

However, when talking about our prehistoric ancestors, it is mostly in the context of evolutionary science, and this piece of information is not mentioned. Additionally, this context of evolutionary science tends to focus on physical attributes, as opposed to acknowledging other behavioural and social attributes, and how environments and diversity can shape animals. This often leads to ideas that use evolutionary science as a justification for bad behaviours.⁶¹

Profiting through benefitting as many people as possible as cheaply as possible will exclude people who would not use it in the most common way possible. This often includes accessibility, which benefits does not stop at disabled people. Currently, for accessibility to exist, it needs to be accompanied by another factor to be considered. In the monograph *Bibliotheken heute!: Best Practice in Planung, Bau und Ausstattung*⁶² are several examples of how accessibility is accompanied by the

⁶⁰ Jean-Jacques Hublin, 'The Prehistory of Compassion', *Proceedings of the National Academy of Sciences* 106, no. 16 (21 April 2009): 6429–30, <https://doi.org/10.1073/pnas.0902614106>; Paul Salopek, 'The Natural History of Compassion', Out of Eden Walk, 11 October 2015, <https://www.nationalgeographic.org/projects/out-of-eden-walk/articles/2015-11-the-natural-history-of-compassion/#!>

⁶¹ Burdett, 'Post Darwin: Social Darwinism, Degeneration, Eugenics - The British Library'.

⁶² Petra Hauke and Klaus Ulrich Werner, *Bibliotheken heute!: Best Practice in Planung, Bau und Ausstattung*, 1st ed. (Bad Honnef: Bock + Herchen, 2011).

solution of other problems. For one library, accessibility is accompanied by a fire-escape⁶³, and for another it is accompanied by the librarians transporting books⁶⁴. These were not easy changes to implement. The city library of Diez in Germany was formerly a home and required extensive sanitation and renovation to open up space for the library. This library is also the only public building, other than the hospital, in that town that has a lift, and this addition was a marketing point to invite more users, especially with the younger audiences.⁶⁵ While this is an example of how not everyone who uses accessibility functions are disabled, the phrasing and in context of the rest of the monograph implies that public buildings, such as the library, being accessible is novel. This is not to discredit the possibility that accessibility is assumed, rather that the translated phrase “wonderfully accessible”, in a non-accessible world, can imply novelty.

Sometimes, the justification is not enough. One prominent example used against building accessibility related structures is the protection of monuments. In a podcast episode of *barrierefrei aufgerollt* (Accessibility

⁶³ Gabriele Böttcher and Martina Möschl, ... ‘... Über Der Hofausfahrt Ein Theatersaal ...’, ed. Petra Hauke and Klaus Werner (Humboldt-Universität zu Berlin, Philosophische Fakultät I, Institut für Bibliotheks- und Informationswissenschaft, 2011), 15–23, <http://dx.doi.org/10.18452/2205>.

⁶⁴ Ines Thoermer, ‘Pfauenaugen Unter Denkmalschutz’, ed. Petra Hauke and Klaus Werner (Humboldt-Universität zu Berlin, Philosophische Fakultät I, Institut für Bibliotheks- und Informationswissenschaft, 2011), 67–81, <http://dx.doi.org/10.18452/2208>.

⁶⁵ Monika Scharf and Nicole Lieber, ‘Öko-Logisch!’, ed. Petra Hauke and Klaus Werner (Humboldt-Universität zu Berlin, Philosophische Fakultät I, Institut für Bibliotheks- und Informationswissenschaft, 2011), 92–97, <http://dx.doi.org/10.18452/2210>.

Rolled On) on 31st October 2020, the guest, Wolfgang Salcher, *Stellvertretender Leiter der Wiener Abteilung für das Bundesdenkmalamt* (a deputy of the Vienna Department for Monument Protection), quotes that monument protection is an often quoted reason but is not actually the case, and has even been elegantly implemented. When asked about the scenario of not being able to build accessibility into monument buildings, he says that “if there is a will, there is a way.”⁶⁶ This can also imply that disabled people are additional potential participants of cultural events, as opposed to people who are already included and considered.

At the same time, accessibility options, that the department for monument protection approve of, are not always accessible. In Munich 2020, Sigi Rothmund, who has scoliosis, was fighting to make their living space, which was under monument protection, age-appropriate by adding an elevator. While adding an elevator would narrow the staircase from 1.38 meters to 1.03 metres, it would make it accessible for everyone who lived in that building. The suggestions made by the Monument Protection Department were not sufficient, sometimes contradictory. Adding an outside elevator requires the destruction of historic windows and walls, which Günter Ippendorf, representing the community of tenants in this case, found also to be under protection. It would also

⁶⁶ Katharina Müllebnner, ‘Sendung 38: Barrierefreiheit und Denkmalschutz’, barrierefrei aufgerollt Radiosendung, accessed 12 October 2022, <https://www.barrierefrei-aufgerollt.at/sendung-38-barrierefreiheit-und-denkmalschutz/>.

darken the rooms, which tenants did not want. Additionally, they would then require adding a stairlift because that outside lift could only be accessed on certain floors. According to the authorities, the request would intrude on the *Treppenaue* (stairwell hole). When asked twice why an outside lift and stair lift would be less bad than an inside lift, the spokesperson did not answer. According to the article, Ippendorf continued this fight with unknown fate, and Rothemund decided to move out to his second home in Spain. What must be stated is that the article mentioned one of the initiatives of the Munich government is about growing old. The spokesperson stated in regard to monument protection, the tenants' demands would have to be secondary, even if that means moving out from their unlivable living space. Otherwise, "Monument Protection would be consistently undermined," a telling statement.⁶⁷ Between the stairs of the building and the people living in said building, the stairs mattered more, contradicting their initiatives. One could only speculate, "who is interested in the stairs?", or if current Monument Protection needs revision, especially if having an ageing population live comfortably is a goal. If there were any other reason, such as structural integrity or fire safety, that has not been mentioned. Revision is entirely possible as the Bavarian Federal Ministry of Science and Art are, as of the writing of this thesis,

⁶⁷ Sebastian Krass, 'Wohnen in München: Barrierefreiheit versus Baukultur', *Süddeutsche.de*, 17 August 2020, <https://www.sueddeutsche.de/muenchen/muenchen-denkmalschutz-barrierefreiheit-baukultur-grillparzerstrasse-1.5001427>.

revising their law on Monument Care to be in line with climate protection and energy saving goals.⁶⁸ As mentioned in Pixie's *Inaccessibility Cycle*, the lack of access perpetuates exclusion and invisibility, which in turn leads people to be less likely to consider accessibility. The *Deutsches Nationalkomitee für Denkmalschutz* (German National Committee for Monument Protection) states in their 2018 article about Accessibility and Monument Protection, that age-appropriate homes need to be above all accessible with an even level or with a lift, have wide doors, walk-showers, to name a few requirements. What happened to Rothenmund and Ippendorf is not as uncommon as you would think, with 83% of seniors (people older than 65) living in apartments that require renovation, 12% in apartments that cannot be renovated. Moving out to a different home, especially amidst a "grey housing shortage" of accessible, age-appropriate homes,⁶⁹ is something Rothenmund could do without much trouble, but cannot be said for everyone else.

This situation is mirrored with the Austrian Ombudsman Board's article *Barrierefreiheit oder Denkmalschutz?* (Accessibility or Monument Protection?), in which they had two test persons, a wheelchair-user and

⁶⁸ Bayerisches Staatsministerium für Wissenschaft und Kunst, 'Ministerrat beschließt Neuerungen im Bayerischen Denkmalschutzgesetz', 13 December 2022, <https://www.stmwk.bayern.de/kunst-und-kultur/meldung/6892/wir-bringen-klimaschutz-und-denkmalschutz-zusammen-neuerungen-im-bayerischen-denkmalschutzgesetz.html>.

⁶⁹ Deutsches Nationalkomitee für Denkmalschutz, 'Barrierefreiheit und Denkmalrecht', *Deutsches Nationalkomitee für Denkmalschutz* (blog), 15 January 2018, <https://www.dnk.de/fokus/barrierefreiheit-und-denkmalrecht/>.

disability lawyer Hansjörg Hofer, visit Vienna's Museums. In regard to the Natural History Museum and the Art History Museum, they conclude that both of these buildings are not accessible without outside help. Specifically, a wheelchair user needs to go to a separate entrance, manned by a porter who lets them in and have them be escorted into the building, an entrance that the Board argues does not fulfil the *Bundes-Behindertengleichstellungsgesetz* (The Austrian Federal Act on the Equalization of Persons with Disabilities). Other museums do not fulfil the accessibility requirements due to the steepness of the ramps, the cobblestones in front of the entrances, missing handrails or slow stair, which would hinder the emergency escape of the people who use them.⁷⁰

While this is an old building and so it is more difficult to apply changes to these buildings with as little damage as possible, accessibility is framed as a design choice in the same way you can decide to add an aesthetic embellishment, despite it being required by law.⁷¹ At the time of writing this thesis, the Technical University of Vienna offers Universal Design, where accessibility is a topic that is discussed, as an **option** as part of the *Architekturforschung* (Architecture Research)

⁷⁰ 'Barrierefreiheit oder Denkmalschutz?', accessed 15 November 2022, <http://volksanwaltschaft.gv.at/artikel/barrierefreiheit-oder-denkmalschutz>.

⁷¹ 'RIS - Bauordnung Für Wien - Landesrecht Konsolidiert Wien, Fassung Vom 16.11.2022', accessed 16 November 2022, <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrW&Gesetzesnummer=20000006>.

Module. It also contains no information about the course in the Winter 2022 Semester, with only one zoom link for the kick-off meeting. In the Summer Semester of 2023, the page is filled, all as shown in Figure 5.1-3.

Prüfungsfach Architekturforschung				5.0
Modul Architekturforschung				5.0
SE Wahlseminar		STEOP ✓	3.5	5.0
251.871 SE 2022W	Wahlseminar Kunstgeschichte		3.5	5.0
259.611 SE 2022W	Wahlseminar Digitale Architektur und Raumplanung		3.5	5.0
251.874 SE 2022W	Wahlseminar Case Studies: Architektur als kultureller Diskurs		3.5	5.0
260.674 SE 2022W	Wahlseminar Camillo Sitte und die Grundlagen des Städtebau		3.5	5.0
253.H29 SE 2022W	Wahlseminar Gebäudelehre - Bildungslandschaften		3.5	5.0
251.883 SE 2022W	Wahlseminar Denkmal + Stadt		3.5	5.0
264.222 SE 2022W	Wahlseminar Kunst und Gestaltung 2		3.5	5.0
264.224 SE 2022W	Wahlseminar Kunst- und Kulturtheorie DL		3.5	5.0
264.225 SE 2022W	Wahlseminar Kunst und Gestaltung DL		3.5	5.0
259.647 SE 2022W	Wahlseminar Bauphysik und Bauökologie		3.5	5.0
259.648 SE 2022W	Wahlseminar Universal Design		3.5	5.0
259.650 SE 2022W	Wahlseminar Topos in architectural theory		3.5	5.0
259.671 SE 2022W	Wahlseminar Architekturtheorie		3.5	5.0

Figure 5.1 - *Architekturforschung* Module in Architecture Bachelor Curriculum, Technical University of Vienna. *Wahlseminar* and *Wahlseminar Universal Design* highlighted.

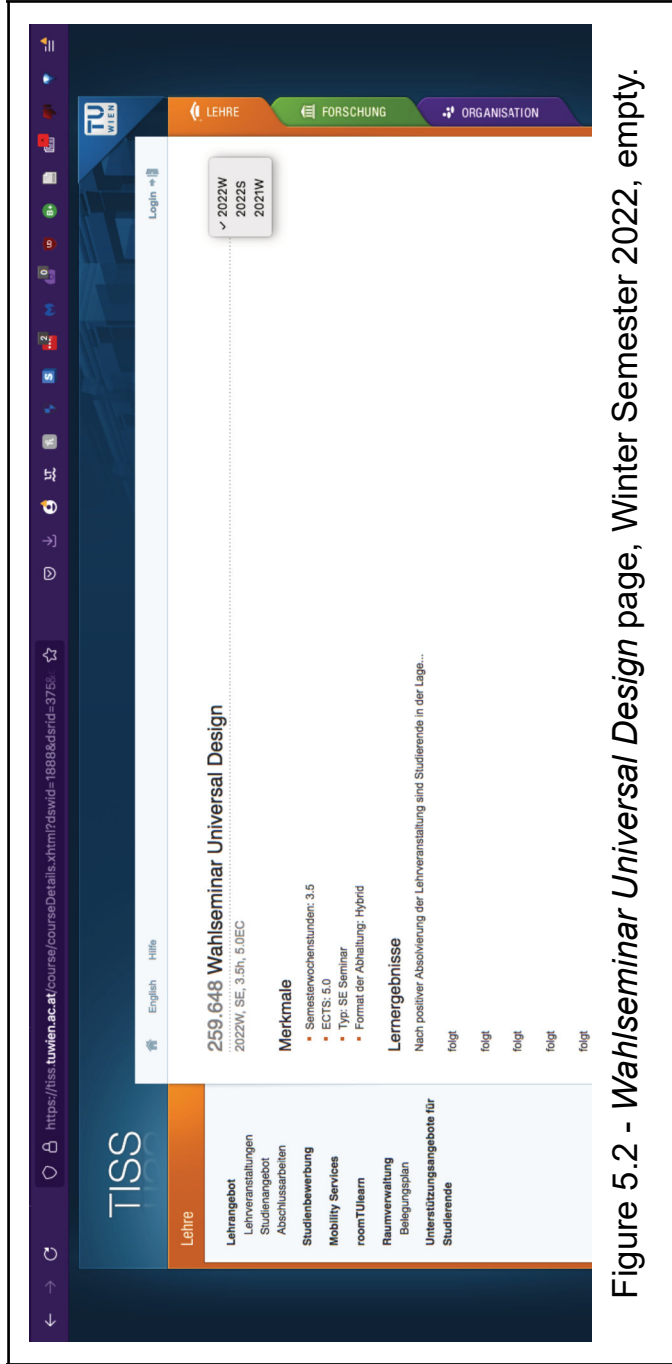
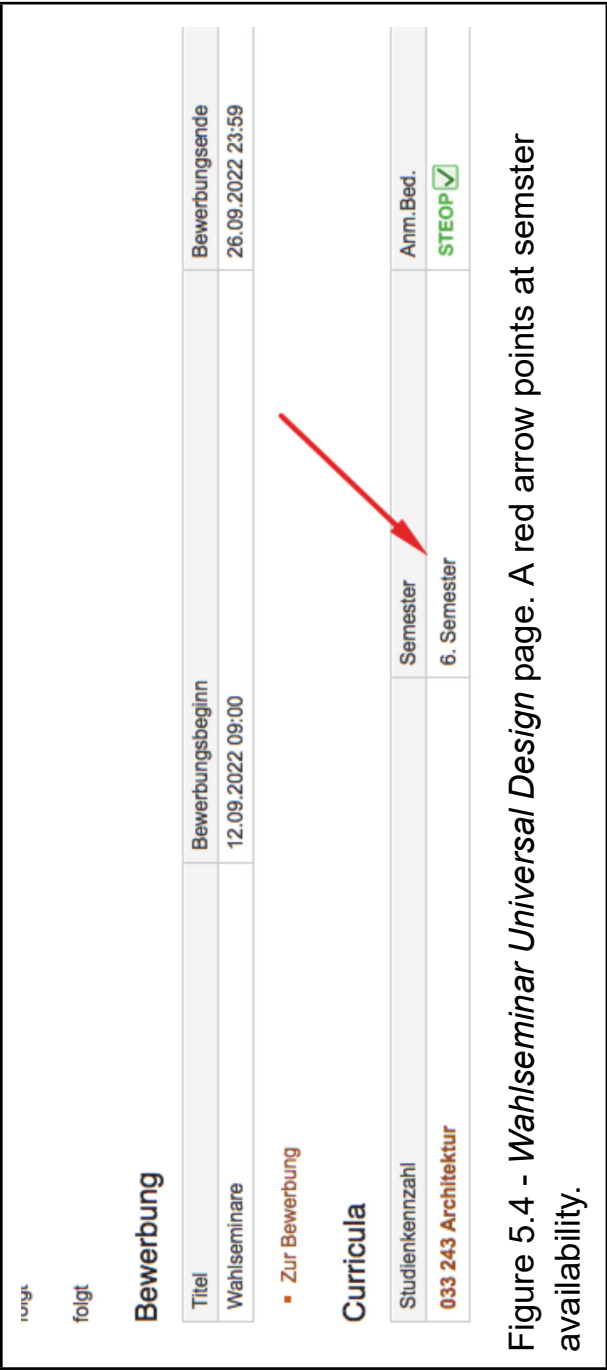


Figure 5.2 - *Wahlseminar Universal Design* page, Winter Semester 2022, empty.

The screenshot displays the TISS (TU Institute for Science and Society) website. The top navigation bar includes links for 'LEHRE' (Teaching), 'FORSCHUNG' (Research), and 'ORGANISATION'. The main header features the TU Wien logo and the TUEWEL logo. The page title is '259 648 Wahlseminar Universal Design'. Below the title, it specifies '2023S, SEL 3 Stk, 5 ECTS'. A list of features includes 'Zum TUEWEL Online-Kurs', 'Seminarwochenstunden, 3.5', 'ECTS 5.0', 'TIP SE Seminar', and 'Format der Vorlesung: Hybrid'. The 'Lernergebnisse' (Learning Outcomes) section states that students will be able to identify essential aspects and research topics of Universal Design, and that the seminar will provide an overview of relevant and current topics. The 'Inhalt der Lehrveranstaltung' (Content of the Course) section describes the seminar as a series of lectures for the Bachelor's degree in Architecture, aimed at introducing students to scientific aspects of the field. The 'Methoden' (Methods) section lists various methods used in the seminar, such as background research, identification of research and development needs, selection of appropriate research methods, and evaluation of results. The sidebar on the left contains links to 'Lehre', 'Lehrangebot', 'Studienberatung', 'Mobility Services', 'roomIT/Usam', 'Räumlichkeiten', 'Besuchsguide', and 'Studierende'.

Figure 5.3 - Wahlseminar Universal Design page, Summer Semester 2023, filled.

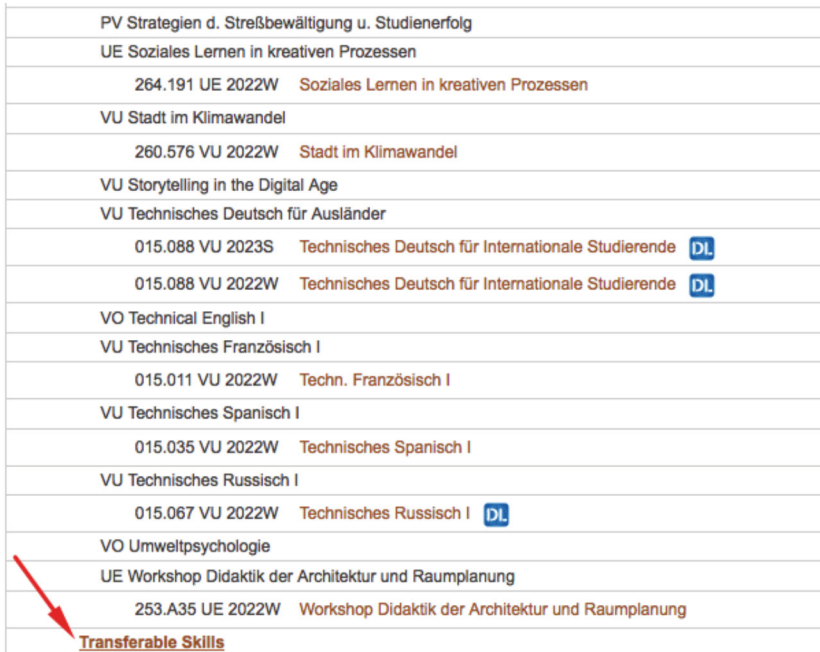
You also can take this course, in the 6th Semester as shown in Figure 5.4.



Additionally, the *Transferable Skills* Catalog, requiring 6 ECTS allocation, has a course called *Design for All*. However, it is not shown initially under *Transferable Skills*.



You need to open *Transferable Skills*, leading to a separate page that lists everything.



PV Strategien d. Streßbewältigung u. Studienerfolg	
UE Soziales Lernen in kreativen Prozessen	
264.191 UE 2022W	Soziales Lernen in kreativen Prozessen
VU Stadt im Klimawandel	
260.576 VU 2022W	Stadt im Klimawandel
VU Storytelling in the Digital Age	
VU Technisches Deutsch für Ausländer	
015.088 VU 2023S	Technisches Deutsch für Internationale Studierende DL
015.088 VU 2022W	Technisches Deutsch für Internationale Studierende DL
VO Technical English I	
VU Technisches Französisch I	
015.011 VU 2022W	Techn. Französisch I
VU Technisches Spanisch I	
015.035 VU 2022W	Technisches Spanisch I
VU Technisches Russisch I	
015.067 VU 2022W	Technisches Russisch I DL
VO Umweltpsychologie	
UE Workshop Didaktik der Architektur und Raumplanung	
253.A35 UE 2022W	Workshop Didaktik der Architektur und Raumplanung
	Transferable Skills

Figure 5.6 - An arrow points to *Transferable Skills* at the bottom of the module page.

Scroll down to *Sonstiges* (Miscellaneous/Other)
(Figure 5.7),

Sonstiges		
VU E-Tutoring, Moderation von E-Learning		
015.087 VU 2022W	E-Tutoring, Moderation von E-Learning	
VO Mietverwaltung und Grundzüge des Mietrechts		
VO Wohnungseigentumsverwaltung und Grundzüge der Wohnungsgemeinnützigkeit		
VO Relativitätstheorie - allgemeinverständlich		
VO How Science Inspires Science Fiction		
VO Strahlenphysikalische und gesellschaftliche Aspekte des Strahlenschutzes		
141.599 VO 2022W	Strahlenphysikalische und gesellschaftliche Aspekte des Strahlenschutzes	
VO Ökologische u. gesellschaftliche Aspekte d. Chemie		
166.127 VO 2023S	Ökologische u. gesellschaftliche Aspekte d. Chemie	
VU Barrierefreies Bauen		
UE Barrierefreies Bauen		
SE Empirisch-wissenschaftliche Sicht, Bedingungen		
SE Die empirisch-wissenschaftliche Sicht		
VO Managementfragen bei der Automation		
VO IT Projektplanung und Vergaberecht		
384.107 VO 2022W	IT Projektplanung und Vergaberecht	DL
VO Sustainability Challenge, Interuniversitäre Lehrveranstaltung		
253.179 VO 2022W	Sustainability Challenge, Interuniversitäre Lehrveranstaltung	DL
VU Wissenschaft verständlich kommunizieren		
015.148 VU 2023S	Wissenschaft verständlich kommunizieren	DL
015.148 VU 2022W	Wissenschaft verständlich kommunizieren	DL
<u>VO Design for all</u>		
259.344 VO 2023S	Design for All	DL
VII Grundlagen wissenschaftlichen Arbeitens		

Figure 5.7 - *Sonstiges* section in *Transferable Skills* page. *Design for All* is underlined and a red arrow points to it.

And there you will find the *Design for All* course. The *Barrierefreies Bauen* course, also in *Transferable Skills*, requires passing *Design for All*.

Curricula

Studienkennzahl
066 443 Architektur
TRS Transferable Skills

Literatur

Es wird kein Skriptum zur Lehrveranstaltung angeboten.

Vorkenntnisse

Interesse an den Belangen des Universal Designs.

Anmerkung: Die Kenntnisse der Inhalte dieser LVA sind für eine Teilna

Begleitende Lehrveranstaltungen

- 259.345 VU Barrierefreies Bauen
- 259.346 UE Barrierefreies Bauen

Figure 5.8 - *Design for All* course page. A red arrow pointing at *Barrierefreies Bauen* as an accompanying course, and blue arrow pointing at the Architecture Curriculum with a different reference code.

And while this course is in the *Transferable Skills* Catalogue...

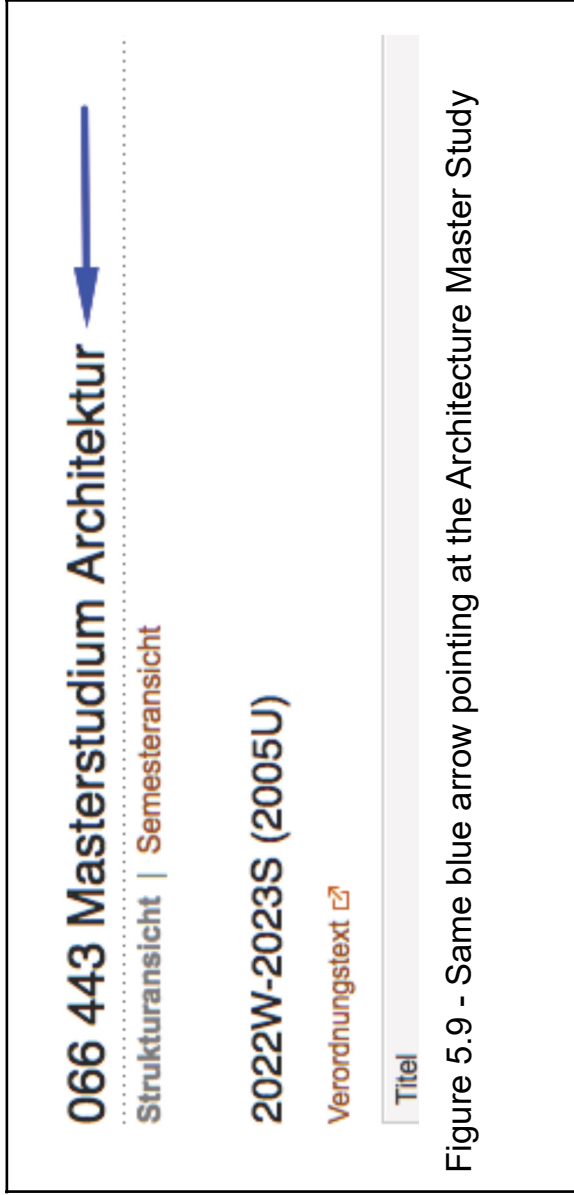


Figure 5.9 - Same blue arrow pointing at the Architecture Master Study

...It is in the Architecture Master Study. It is impossible to take it during the Bachelor study.

This course is however mandatory if a student picks *Bauökologie* (Bilding Ecology) as one of the *Wissenschaftliche und künstlerische Vertiefung* (Scientific and Artistic Deepening) 10 ECTS Modules to fill in the mandatory 30 ECTS.

Modal Bauökologie				
VO Bauphysik des Eco-effizienten Bauens			3.0	3.0
SE Building ecology workshop			2.0	3.0
259.343 SE 2023S	Building ecology workshop	DL	2.0	3.0
VO Design for All			2.0	2.0
259.344 VO 2023S	Design for All	DL	2.0	2.0
UE Barrierefreies Bauen			0.75	1.0
259.346 UE 2023S	Barrierefreies Bauen	DL	1.0	1.0
VO Protective Ecology			1.0	1.0
259.347 VO 2023S	Protective ecology		1.0	1.0
empfohlene Wahlfächer				
VU Barrierefreies Bauen			0.75	1.0
259.345 VU 2023S	Barrierefreies Bauen	DL	1.0	1.0
VU Fire safety			0.75	1.0
259.348 VU 2023S	Fire safety		0.75	1.0
VO Visual aspects of building performance			0.75	1.0
Modal Bildungslandschaften				3.0
VO Bildungslandschaften			1.0	1.0

Figure 5.10 - *Bauökologie* in the curriculum

Scroll down to *Katalog für all Hörerinnen/Hörer* (Catalogue for all Students) at the bottom, as shown in Figure 5.11.

VU Tragwerksentwurf - Materialgerechter Tragwerksentwurf mit metallischen Werkstoffen		3.0	4.0
VU Tragwerksentwurf unter besonderer Berücksichtigung von nachhaltigen Konstruktionen		3.0	4.0
VO Tutorium Tragwerkslehre 1		2.0	2.0
259.631 VO 2022W Tutorium Tragwerkslehre 1		2.0	2.0
VO Tutorium Tragwerkslehre 2		2.0	2.0
259.665 VO 2023S Tutorium Tragwerkslehre 2		2.0	2.0
Sonstige Lehrveranstaltungen			
VO Bau- und Immobilienwirtschaft		2.0	2.0
VO Betriebswirtschaftliche Grundlagen der Projektentwicklung		2.0	2.0
260.300 VO 2022W Betriebswirtschaftliche Grundlagen der Projektentwicklung		2.0	2.0
EX Exkursion		1.0	2.0
253.106 EX 2022W Exkursion Shoppingmall & Kloster		1.0	2.0
VO Mathematik		2.0	2.0
SE Vertiefungsseminar		3.5	5.0
Katalog Für alle Hörerinnen/Hörer			

Figure 5.12 - *Katalog für all Hörerinnen/Hörer* as shown. A red arrow points to it.

And it's under Studieren mit Behinderung - Eine Einführung, near the top.



Conversely, for *Denkmal* (Monument) related subjects, which also have their own laws that govern them, there are three in total for the bachelor course, one which is mandatory, one is an elective seminar in the same Architecture Research Module with Universal Design, and the last is a choice in the *Wahlfachkatalog*, but is visibly placed in the Architecture Curriculum page, as opposed to Design for All which is hidden under *Wahlfachkatalog* in an “Other” category, all shown in Figures 5.14-6.

Prüfungsfach Geschichtliche und theoretische Grundlagen			18.0
Modul Architektur- und Kunstgeschichte			5.0
VO Architektur- und Kunstgeschichte 1	STEOP		3.0
251.866 VO 2022W Architektur- und Kunstgeschichte 1			3.0
VO Architektur- und Kunstgeschichte 2			2.0
Modul Baugeschichte			5.0
VO Baugeschichte 1	STEOP ✓		3.0
251.868 VO 2022W Baugeschichte 1			3.0
VO Baugeschichte 2	STEOP ✓		2.0
Modul Denkmalpflege			3.0
VO Denkmalpflege	STEOP ✓		3.0
251.870 VO 2022W Denkmalpflege			3.0
Modul Architekturtheorie und Technikphilosophie			5.0
VO Architekturtheorie 1	STEOP ✓		3.0
259.597 VO 2022W Architekturtheorie 1			3.0
VO Architekturtheorie 2	STEOP ✓		2.0

Figure 5.14 - *Denkmalpflege* in the *Geschichtliche und theoretische Grundlagen*
(Historical and theoretical Fundamentals) highlighted.

Prüfungsfach Architekturforschung				5.0
Modul Architekturforschung				5.0
SE Wahlseminar			STEOP ✓	5.0
251.871 SE 2022W	Wahlseminar Kunstgeschichte			5.0
259.611 SE 2022W	Wahlseminar Digitale Architektur und Raumplanung			5.0
251.874 SE 2022W	Wahlseminar Case Studies: Architektur als kultureller Diskurs			5.0
260.674 SE 2022W	Wahlseminar Camillo Sitte und die Grundlagen des Städtebau			5.0
253.H29 SE 2022W	Wahlseminar Gebäudelehre - Bildungslandschaften			5.0
251.883 SE 2022W	Wahlseminar Denkmal + Stadt			5.0
264.222 SE 2022W	Wahlseminar Kunst und Gestaltung 2			5.0
264.224 SE 2022W	Wahlseminar Kunst- und Kulturtheorie DL			5.0
264.225 SE 2022W	Wahlseminar Kunst und Gestaltung DL			5.0
259.647 SE 2022W	Wahlseminar Bauphysik und Baudkologie			5.0
259.648 SE 2022W	Wahlseminar Universal Design			5.0
259.650 SE 2022W	Wahlseminar Topos in architectural theory			5.0

Figure 5.15 - Architekturforschung Module. Wahlseminar Denkmal + Stadt is highlighted.

Wahlfachkatalog Architektur		+		
Lehrbereich Entwurf und Darstellung				
UE Architekturmodellbau 1			3.0	4.0
258.032 UE 2022W	Architekturmodellbau		3.0	4.0
264.031 UE 2022W	Architekturmodellbau II		3.0	4.0
UE Beobachtendes Zeichnen 1			1.5	2.0
264.124 UE 2022W	Beobachtendes Zeichnen 1		1.5	2.0
UE Beobachtendes Zeichnen 2			1.5	2.0
UE Denkmalpflege und Bausanierung			3.0	4.0
257.036 UE 2022W	Denkmalpflege und Bausanierung		3.0	4.0
VO Einführung in die Visuelle Kultur			2.0	2.0
VO Gebäudelehre 2			2.0	2.0
VO Grafik-Design			2.0	2.0
253.G74 VO 2022W	Grafik-Design		2.0	2.0
VU Grafik-Design			3.0	4.0
253.G75 VU 2022W	Grafik-Design		3.0	4.0

Figure 5.16 - Denkmalpflege und Bausanierung (Monument Care and Sanitation)
highlighted in Wahlfachkatalog Architektur (Electives Catalog for Architecture)

The additional aspect for the Architecture Research Module and the Transferable Skills Module, you can only pick a select number of classes to fill this module, and putting other modules at odds with each other. *Architektur als kulturelle Diskurs* (Architecture as Cultural Discourse) engages with how cultural values shifts architecture and vice versa. Healthcare Architecture Research highlights the various needs the users of this building must meet, from the process of healing to the integration of medical equipment. *Planung- und Bauökonomie* (Planning and Building Economy) stresses documentation and the process of planning the construction of buildings. *Kunst und Gestaltung* (Art and Shape) shows how we position Architecture aesthetically and how we curate it. All of these are interesting and useful research projects that are related to designing buildings. However, the framing can suggest that they are at odds with each other and are additional. The nature of Universal Design as a *Wahlseminar* suggests that accessibility, which I reiterate is mandated by law if you build something the public will use⁷², is an option that you can swap out for planning, as if accessibility and planning cannot go hand in hand. While I understand the necessity of limiting what a student can choose as research, the lack of information on the Universal Design page can deter students who are

⁷² 'RIS - Bauordnung Für Wien - Landesrecht Konsolidiert Wien, Fassung Vom 16.11.2022'; Stadt Wien, 'Rechtsvorschriften - Bauvorhaben', accessed 31 May 2022, <https://www.wien.gv.at/wohnen/baupolizei/planen/richtlinien/rechtsvorschriften.html>.

interested in the course. *Barrierefreies Bauen* as a Transferable Skill or Elective also paints a picture that making something accessible is a choice an architect could make in the same way building a health centre is a choice, despite the fact that health centres need accessibility.

What we can glean from this is that one of the key core parts of the phenomena that we're trying to identify is not based on law. Monument Protection is also codified into Austrian Law and our relationship with Accessibility and Monument Protection carries the assumption that they are often at odds with each other, despite it legally not being the case. There is a consistent pattern of Monument Protection taking precedence over Accessibility and in education, which changes how people who need these accessibility options engage with monuments. When considering all this in the context of designing a library, this is one way that the novelty of accessibility can be explained. This does not mean that accessibility is not seen as unimportant: there is a large demand for these courses. There is a strong possibility that the resources are not there to accommodate the demand.

As mentioned before, disability is not rare. The manifestations of their exclusion however is quite common and is often paired with other forms of exclusion. In Mel Baggs' blogpost *There is ableism somewhere at the heart of your oppression, no matter what your oppression might be*, they outline many different examples of ableism and how it is used to justify other

types of oppression. They also point out that often times when combating said ideas, the underlying ableism is missed.

“Take the IQ situation. Nondisabled people of color who are classified as having lower IQs than white people, rarely look into how IQ has been used to oppress disabled people ever since it has existed, pretty much. They don’t look into what cognitive ableism is. They don’t look into the self-advocacy movement by people with intellectual and other developmental disabilities and the many ways they have criticized IQ testing and the way it is used against disabled people. Instead, they try to prove that people of color don’t really have lower IQs than white people.” ⁷³

It is not just inclusion of people with fundamentally different experiences of life when designing policy, education, healthcare, and buildings that allows for nuance, the very act of separating health and human moral construct allows us to ask questions on a systemic level. Diabetes would not be considered just a health

⁷³ Mel Baggs, ‘There Is Ableism Somewhere at the Heart of Your Oppression, No Matter What Your Oppression Might Be.’, *Ballastexistenz* (blog), 1 May 2016, <https://ballastexistenz.wordpress.com/2016/05/01/there-is-ableism-somewhere-at-the-heart-of-your-oppression-no-matter-what-your-oppression-might-be/>.

issue, it would also be considered a symptom of other fundamental issues such as access to food, transportation, and poverty.⁷⁴

A great example of this is how we think about laziness and what we attribute to laziness. Laziness has a negative connotation, and it is tempting to attribute certain behaviours as lazy, especially in a society where your worth is measured by the amount of work you put in and with a belief the world is just. This, however, does not consider the possibility that the barriers a person faces are legitimate, which also includes accessibility and disability. When Whole Foods was selling peeled oranges in plastic containers. This has sparked outrage, many calling it a wasteful packaging. Whole Foods has since then pulled it off the shelves. What many people miss is that this item is not for people who can peel oranges easily, and they have assigned laziness to those who buy it.⁷⁵ In considering climate change and environmental activism, it does not consider that the society we

⁷⁴ 'WHO | Diabetes', 26 August 2013, <https://web.archive.org/web/20130826174444/http://www.who.int/mediacentre/factsheets/fs312/en/>; 'Food Insecurity and Diabetes | ADA', accessed 15 March 2022, <https://www.diabetes.org/healthy-living/recipes-nutrition/food-insecurity-diabetes>; 'Diabetes Und Behinderung', accessed 26 April 2022, <https://www.diabetes-deutschland.de/archiv/1847.htm>; 'Is Diabetes a Disability? | ADA', accessed 8 March 2022, <https://diabetes.org/tools-support/know-your-rights/discrimination/is-diabetes-a-disability>.

⁷⁵ Jennifer Earl, 'Whole Foods Responds to \$6 Pre-Peeled Orange Twitterstorm', 8 March 2016, <https://www.cbsnews.com/news/whole-foods-responds-to-6-pre-peeled-orange-twitterstorm/>.

participate in is not accessible for people who would need aid or accommodation in which plastic is the best material.⁷⁶ When confronted with the possibility of legitimate barriers, that even when striving to better one's situation still leaves a negative outcome, when having the belief in a just world they react by protecting those beliefs.⁷⁷ Simply put, a trait of this unsustainable short-sightedness is the lack of consideration, whether by ignorance or malice, towards the sheer energy consumption necessary to survive day-to-day life. For Ash, it seems obvious why they would need accommodations, but for Sarah, she is more likely to be scrutinized for her "laziness". This also affects how information is conveyed, to which Kyle needed to spend more time looking for information that should be easy to find.

Designing around hindsight is unsustainable.
Designing around personal hindsight is especially unsustainable. The thought process of constantly thinking

⁷⁶ Melanie Mignucci, 'As-Seen-On-TV Products Aren't For "Lazy People" — They Make Disabled People's Lives Easier', *Bustle*, 22 September 2017, <https://www.bustle.com/p/as-seen-on-tv-products-arent-for-lazy-people-they-make-disabled-peoples-lives-easier-2432833>; s e smith, 'Banning Straws Might Be a Win for Environmentalists. But It Ignores Us Disabled People.', *Vox*, 19 July 2018, <https://www.vox.com/first-person/2018/7/19/17587676/straws-plastic-ban-disability>.

⁷⁷ Lauren D. Appelbaum, Mary Clare Lennon, and J. Lawrence Aber, 'When Effort Is Threatening: The Influence of the Belief in a Just World on Americans' Attitudes Toward Antipoverty Policy', *Political Psychology* 27, no. 3 (2006): 387–402, <https://doi.org/10.1111/j.1467-9221.2006.00506.x>.

in the short-term, when extrapolated over the course of time, is just applying plaster after plaster on a macro-level. This especially goes hand in hand with how we as people consume. “I do not need this, so why should I keep it,” is a thought process that often happens to individuals when considering, say, throwing a shirt. But as the trend cycle gets shorter and shorter, throwing a shirt to the trash becomes unsustainable for the consumers, but it is the cheapest option over saving the shirt for the manufacturers.⁷⁸ But this is not about shirts, this is about people needing access, and we need to examine how our relationship with production and capital influences how we talk about accessibility. While knowing a disabled person feels like a small thing at a personal scale, the very act of including them can significantly shift perspectives and opinions.

Inclusion and diversity in workplaces, science, and public affairs has shown various benefits. In workplaces, simultaneously addressing the uniqueness of a person’s social identity and validating their need for belonging does not only lead to inclusive outcomes, it increases the likelihood of successful strategies and employee satisfaction.⁷⁹ *Mind the Gap: A Handbook of Clinical Signs in Black and Brown Skin*, a booklet by medical student

⁷⁸ Stella Hertantyo, ‘The Impact of Fashion Trend Cycles and Trend Forecasting’, *Conscious Life & Style* (blog), 11 March 2022, <https://www.consciouslifeandstyle.com/fashion-trend-cycles/>.

⁷⁹ Nisha Nair and Neharika Vohra, ‘Diversity and Inclusion at the Workplace: A Review of Research and Perspectives’, Working Paper (Indian Institute of Management Ahmedabad, 2015), <http://vslir.iima.ac.in:8080/xmlui/handle/11718/16616>.

Malone Mukwende, Dr Peter Tamony, and Margot Turner, provides insight on how medical conditions look like on darker-skinned bodies. Mukwende highlights that the delay on a diagnosis or misdiagnosis in part caused by the lack of knowledge of how illness presents on darker skin tones, adding,

“As well as offering images of conditions on black and brown skins frequently omitted in text books we have also looked at language and descriptors that often assume the patient is white.”⁸⁰

Brainard in his article, *Putting “Perspectives” in Perspective: Literary Fiction, Empathy & Diversity In the Public Affairs Classroom*, lists the various means in which literary fiction can serve to open dialogue in classrooms about difficult topics, such as racism, integration, and immigration. The participants, in this case being public administrator students attending a university course of the same name, read three books broaching various topics,

“The course began with a 1-hour workshop on difficult conversations, in which students engaged in exercises demonstrating the value of multiple perspectives, active listening without trying to persuade, mirroring, synthesizing diverse

⁸⁰ Malone Mukwende, Dr Peter Tamony, and Margot Turner, *Mind the Gap: A Handbook of Clinical Signs in Black and Brown Skin* (Black and Brown Skin, 2020), <https://www.blackandbrownskin.co.uk/mindthegap>.

viewpoints, and the like. The remaining four weeks centered on three novels: *What Is the What?*, by Dave Eggers, about the life and experiences of a Sudanese child refugee to the US; *Home Fire*, by Kamila Shamsie, about three British siblings each trying to negotiate for themselves their expression of their Britishness and of their Muslim faith amidst public concerns about safety in the context of the war on terror; and *The Intuitionist*, by Colson Whitehead, a racial allegory and a “whodunit” about a department of elevator inspector’s first Black, female elevator inspector. Taken together, the three works enabled conversations about immigration, race, gender, religion, national security, cultural appropriation, citizenship, privilege and oppression, epistemology, social construction, and the relation of individual to state, among others. Students also read one article about the process of self-reflection and the idea of a reflective practitioner (Schön, 1992), to help them dig beyond the superficial in their reflections and relate them to their future in public administration, and watched the movie “The Lives of Others.””⁸¹

⁸¹ Lori A. Brainard, ‘Putting “Perspectives” in Perspective: Literary Fiction, Empathy & Diversity In the Public Affairs Classroom’, *Public Integrity* 23, no. 3 (4 May 2021): 310–27, <https://doi.org/10.1080/10999922.2020.1782118>.

The outcomes were students becoming far more empathetic and aware of not only the views the characters held, but also the views the students held themselves. Additionally, this experience has made students more critical of the privileges that they hold, and translating this understanding into how they approached other pieces of writing.

“One student appreciated the prominent positioning of the topic in the curriculum as a first semester required course, writing.

*“... I am so glad that my grad school experience headlined with this class. It has forced to me to look at everything slightly differently. I look at books differently, policy decisions differently, my understanding of history differently, and I have started to be more reflective. I think discussing privilege, inclusion, empathy, communication, etc. is so important when learning about how to be a public administrator and I’m so glad that I started with this class and hope future MPA classes will have something similar.”*⁸²

While this understanding that inclusion of diverse people and treating them as equals leads to better overall outcomes seems self-explanatory, common sense is not

⁸² Brainard.

common nor sense. I cannot say it is confusing because we have precedence on why people exclude others based on traits that they cannot control.

As a society, we are at a point where justice and equity needs to be quantifiable, not just as a form of reference but also for action to be taken. Defining the functions of injustice and marginalisation was and is part of the road to defining justice and equity. Action needs to be proven to be the best course of action, and even that is not guaranteed. An example of this is labour rights, specifically how implementation of occupational health and safety regulations and inspections reduced work injuries with no significant economic changes.⁸³ Another example would be how beneficial creating literacy practices is on students, as it improves other skills related to executive function.⁸⁴ This also means a higher chance of an educated community.

This parallels on the implementation of accessibility, such as:

When Rothemund and his co-tenants wanted an elevator that would exponentially improve their lives, and subsequently everyone after them, the monument protection took higher priority.

⁸³ David I. Levine, Michael W. Toffel, and Matthew S. Johnson, 'Randomized Government Safety Inspections Reduce Worker Injuries with No Detectable Job Loss', *Science*, 18 May 2012, <https://doi.org/10.1126/science.1215191>.

⁸⁴ Nicole Lynn Alston-Abel and Virginia W. Berninger, 'Relationships Between Home Literacy Practices and School Achievement: Implications for Consultation and Home-School Collaboration', *Journal of Educational and Psychological Consultation* 28, no. 2 (3 April 2018): 164–89, <https://doi.org/10.1080/10474412.2017.1323222>.

When considering the existence of peeled oranges in a plastic container being sold, the environmental aspect took priority over the accessibility aspect, as opposed to acknowledging the intersection of disability and climate change.

The way laziness and ableism are intertwined makes the act of considering possible legitimate barriers a person would face, such as disability, more difficult.

To answer the previous section's question, accessibility is considered secondary due to many intertwining reasons related to work, effort, and lack of perspective.

1. Disabled people are not considered people who could participate initially, especially when considering the nature of libraries and their status as accessible spaces for everyone,
2. Accessibility is novel and is not made space for in the same way as other subjects,
3. Negative ideas of illness and disability,
4. There is a lack of a concrete pipeline that would guarantee the implementation of accessibility.

For some reason, being kind and considerate requires proof. So, how do we prove that being kind is good, actually?

Design for the People

In the previous section, I highlighted that in the Technical University of Vienna Architecture bachelor curriculum, *Universal Design* is a research project option, and *Barrierefreies Bauen* being an elective and optional skill unless taken with a specific module. From this, we can draw that this curriculum structure gives the impression that accessibility is a choice despite its legal necessity. This is a contradiction that needs to be pointed out so that we can begin to understand the infrastructure, systems, its effects, and if there is even a possible pipeline that ensures accessibility will be built in, or at least considered. I do not think this is done out of malice, rather it is a combination of lack of resources and incentivizing people to consider this, especially when considering the prevalence of the ideas around disability, illness, and function, is difficult. While this thesis is looking at accessibility through the inner workings of libraries and their position as its scope, this can be observed in other parts of living.

Your environment can impact your behaviour and can dictate what or who is desired and what or who are not, as well as affect your mood and your health. This is a documented phenomenon from sociology, to psychology, to medicine.

For example, race relations can be shown through either explicit signage and segregation, but also through implicit laws and regulations that affect specific groups with intention. In the United States, although redlining, the

discriminatory practice of withholding services from people who lived in “hazardous” neighbourhoods, which were typically people of colour and low-income households, is outlawed, the consequences are still felt today.⁸⁵ One example is environmental racism, a type of racism that presents through how the devastation of the environment is affected by racial lines.⁸⁶

Our space also informs what kind of relationships we would develop. The book, *Making Space: Women and the Man-Made Environment* by the architectural feminist collective Matrix Feminist Design Co-operative, goes into detail about how city-planning, car ownership, and the home, to name a few examples, shapes how women behave and move between spaces. For example, in the section *Women and public space*, Jos Boys describes how women, in the new town Milton Keynes, Buckinghamshire with a predicted 100% car ownership, are restricted to their local spaces and lead a “local existence” unless they have access to a car or good public transportation. Boys continues,

“So women tend to lead a more 'local' existence, not just because of domestic roles and responsibilities but also because of an inequality

⁸⁵ Jason Richardson et al., ‘Redlining and Neighborhood Health » NCRC’, *National Community Reinvestment Coalition* (blog), 10 September 2020, <https://ncrc.org/holc-health/>.

⁸⁶ Elena Mejía and Ryan Best, ‘The Lasting Legacy Of Redlining’, *FiveThirtyEight*, 9 February 2022, <https://projects.fivethirtyeight.com/redlining/>.

between the genders in access to resources. Much planning takes this inequality for granted. The 'neighbourhood' unit, on which towns like Milton Keynes are based, offers particular facilities locally - a few shops, parks, primary school and health care facilities which, as McDowell says, could be 'benevolently interpreted as reducing travel times and costs for women and children, less benevolently as minimizing choice'. Such planning policies produce a self-fulfilling prophecy: women are locally based not only through their allotted role but also because the arrangement of space precludes alternatives: the physical patterning of space and activities supports, perpetuates and 'naturalizes' the difficulty of getting beyond the local neighbourhood."

This also plays into how women are taught their mobility from being seen as less than a woman if they are more mobile like men, to being socialized off the streets, restricting their activities, emphasizing activities around grace rather than speed. This also leads to them learning, "to take up as little space as possible to be allowed within the category 'female'" and "Boys soon learn that they can prove their 'boyiness' by taking up lots of room, particularly outside on the street."⁸⁷

⁸⁷ Matrix (Organization), ed., *Making Space: Women and the Man-Made Environment* (London: Pluto Press, 1984).

Another example is the connection between mental health and cleanliness. *Aurikatariina*, a Finnish YouTube channel and TikTok of Auri and her company cleaning people's houses for free, was asked why she does what she does. She said in her introductory videos that there are circumstances that make cleaning difficult, in a lot of cases being a mental illness, trauma, loss of a loved one, or a disability, and that helping others is an important value and that "anything is cleanable".⁸⁸ The clutter can result from people using unsustainable methods that work for them. In one *Aurikatariina* video where she cleans for an elderly woman, she remarks that when people cannot clean the dishes, they buy more dishes, which in turn leads to an abundance of dishes that do not fit anywhere, and there is always a dish somewhere in the space.⁸⁹

This connection between health and cleanliness tracks with the research: Morganti et al., 2022's *Study Effect of Housing Quality on the Mental Health of University Students during the COVID-19 Lockdown* highlights that poor indoor-quality is associated with moderate to severe depressive symptom presentation regardless of the housing size.⁹⁰ Chan and Liu in the 2018

⁸⁸ *Depression Made This 😞- CLEANING FOR FREE!*, 2022, <https://www.youtube.com/watch?v=n5ONJLuCM-o>; *WHY I CLEAN FOR FREE?*, 2023, <https://www.youtube.com/watch?v=EuLWwiAPbaE>.

⁸⁹ *SHOCKING Home Makeover for an Elderly Lady* 🍷 ❤️, 2022, <https://www.youtube.com/watch?v=ZjklCZD-c8>.

⁹⁰ Alessandro Morganti et al., 'Effect of Housing Quality on the Mental Health of University Students during the COVID-19 Lockdown', *International Journal of Environmental Research and Public Health* 19, no. 5 (January 2022): 2918, <https://doi.org/10.3390/ijerph19052918>.

study, *Effects of neighborhood building density, height, greenspace, and cleanliness on indoor environment and health of building occupants*, highlight the relationship between Occupant Health, Indoor Environment, and their Neighbourhood Environment using a section of Hong Kong as an example. The green spaces influenced the indoor air quality, which affects the occupant's health, and that neighbourhood cleanliness affected the occupant's visual comfort.⁹¹ Jeannette Pols's study *WASHING THE CITIZEN: WASHING, CLEANLINESS AND CITIZENSHIP IN MENTAL HEALTH CARE*, highlights the relationship between cleanliness and different notions of citizenship for patients in mental health care, such as cleaning for asserting autonomy through privacy, as a skill for independence, as a precondition of citizenship, and as a relational activity.⁹²

In *The Social Life of Small Urban Spaces* by William H. Whyte, he outlines,

“spaces designed to keep out undesirables - pushers, bums, and hippies - for example, generally

⁹¹ Isabelle Y. S. Chan and Anita M. M. Liu, 'Effects of Neighborhood Building Density, Height, Greenspace, and Cleanliness on Indoor Environment and Health of Building Occupants', *Building and Environment* 145 (1 November 2018): 213–22, <https://doi.org/10.1016/j.buildenv.2018.06.028>.

⁹² Jeannette Pols, 'WASHING THE CITIZEN: WASHING, CLEANLINESS AND CITIZENSHIP IN MENTAL HEALTH CARE', *Culture, Medicine and Psychiatry* 30, no. 1 (March 2006): 77–104, <https://doi.org/10.1007/s11013-006-9009-z>.

tend to keep out others, too. In contrast, spaces that attract people tend to be relatively free of problems. The sun is important. So are trees, water and food and most all, seats.”

He continues with an example about plazas, referencing how the ratio of male-female is one of other indicators of how good and used a plaza is,

“The most-used places tend to have a higher than average proportion of women. The male-female ratio of a plaza basically reflects the composition of the work force, which varies from area to area - in midtown New York, it runs about 60 percent male, 40 percent female. Women are more discriminating than men as to where they will sit, more sensitive to annoyances, and women spend more time casting the various possibilities. If a plaza has a markedly lower than average proportion of women, something is wrong. Where there is a higher than average proportion of women, the plaza is probably a good one and has been chosen as such.”⁹³

H. Whyte is very much correct in that. *Hostile infrastructure*, infrastructure intended to create and curb specific social behaviours, such as spikes on the side of

⁹³ William H. Whyte, *The Social Life of Small Urban Spaces* (Project for Public Spaces, 1980).

buildings to prevent people from sitting, and bars on benches to prevent homeless people from sleeping, have also been hostile towards pregnant people, and disabled people.⁹⁴

Similarly, in Mark Macek's *The politics of campus planning: How UT architecture restricts activism*, he outlines the various actions and attempts of then-Chairman of the U.T. Board of Regents Frank C. Erwin's deliberate suppression of student activism, from bulldozing green spaces, separating student and non-student bodies by stripping the Student Attorney of their powers and enforcing student photo identification, to renovating the Texas Union in a manner that prevented congregation, to physical walling of university buildings. Jacob Geller mentions this "panopticism" in his video *Games, Schools, and Worlds Designed for Violence* in relation to how this type of surveillance and control, and other anti-shooter measures mirror video game shooters like *Gears of War* and *Red Dead Redemption*. In the wake of creating protective measures, they have simultaneously created spaces for violence. That is not to say that there should not be any protective measures, rather that this creates the psychological feeling of anxiety, being unwanted, undesirable, and undeserving of dignity.⁹⁵ This overall feeling parallels designing spaces

⁹⁴ Alex Andreou, 'Anti-Homeless Spikes: "Sleeping Rough Opened My Eyes to the City's Barbed Cruelty"', *The Guardian*, 18 February 2015, sec. Society, <https://www.theguardian.com/society/2015/feb/18/defensive-architecture-keeps-poverty-undeen-and-makes-us-more-hostile>.

where accessibility takes a small but significant back seat. Accommodations that do not help people in wheelchairs will also not help people who push baby-carriages, bicycles, and the postman's delivery, to name the few. While ramps are not for everyone, including people who have limited mobility in their ankles and feet, not including them or even making a worse ramp, is bad for everyone.

The very phenomenon where accommodations or design choices that are made to accommodate a specific group of people end up benefiting others as a whole has a coined term, namely the *Curb Cut Effect*. Named after Michael Pachovas's intervention of pouring cement to create slopes in Berkeley, California in the 1970s, the curb-cut effect refers to the phenomena of accommodations that work for people that need them and are appreciated by other groups of people in society. When Pachovas and his friends first created those slopes, it was a political act for mobility, as he was a wheelchair-user. Disability advocates pushed for more access during a time when there was no law that explicitly required accessible forms of entry and protected disability as a class on the federal level. When the Disabilities Act of 1990 was signed officially by George H. W. Bush into effect, curb-cuts became mandated by law.⁹⁶ While curb-cuts did confuse blind people as it did not help

⁹⁵ *Games, Schools, and Worlds Designed for Violence*, 2019, <https://www.youtube.com/watch?v=usSfgHGEgXQ>.

⁹⁶ Angela Glover Blackwell, 'The Curb-Cut Effect (SSIR)', Magazine, Stanford Social Innovation Review, Winter 2017, https://ssir.org/articles/entry/the_curb_cut_effect.

differentiate the road and the pavement, this matter was and has been solved using floor patterns and training that does not place the blind person close to the pavement⁹⁷. For the United Kingdom, the manual *Guidance on the Use of Tactile Paving Surfaces* by the Department of the Environment, Transport and the Regions, goes not only further on the different design to denote what each pattern is used for, they had to be specifically designed so that it did not hurt or hinder people with arthritis or other wheelchair users.⁹⁸

The Curb-Cut Effect does not just apply to urban design, but also in other aspects of life, such as video games, for example. Mark Brown's Game Maker's Toolkit Video Series *Designing for Disability* speaks about designing for disabilities ranging from visual to cognitive. He and the comment section mentioned the various overlaps with an abled person, such as subtitles for deafness or when you need to let the baby sleep. He even mentions the difference between subtitles and closed captions.⁹⁹

That said, not all accessibility items or infrastructure are built the same. Some accessibility items are created

⁹⁷ Bryan Bashin, 'Truncated-Dome Threat Still Looming', *The Braille Monitor*, March 2001, <https://nfb.org/images/nfb/publications/bm/bm01/bm0103/bm010303.htm>.

⁹⁸ *The Little-Known Patterns on British Streets*, 2017, <https://www.youtube.com/watch?v=cdPymLgfXSY>; Department of the Environment, Transport and the Regions, 'Guidance on the Use of Tactile Paving Surfaces' (Department of the Environment, Transport and the Regions, 1998).

⁹⁹ *Making Games Better For...*

to grant autonomy for people who use it, but it is not accessible for everyone to use. An example of an inflexible accessibility item is the *EuroKey*. It is designed specifically to allow people with a disability identity card to access facilities such as the toilet, and use stair lifts. It is another way of granting those with the key agency and more freedom of movement. If you do not have a disability ID, you can get a EuroKey with a doctor's diagnosis. If you do not meet the requirements for the EuroKey, it is relatively inexpensive 30 EUR.¹⁰⁰ The downsides however are that it assumes you have access to a doctor or a specialist, and it assumes that you have access to government services, such as insurance, proof of residence, etc. It essentially asks "how disabled are you" on top of other inherent privileges. It does not consider the onset of disability, and how some disabilities progress over time. The existence of the EuroKey can put the onus of access onto the person with the disability pass, the implication that the world is already accessible, which it is not. Definitions of Disability and Accessibility are important and necessary for legislation. At the same time, its creations allow the possibility of stinginess when it comes to access, depending on the doctor who assesses their degree of disability. Within Austrian Law, to meet the legal criteria for a disability pass, you have to have at least 70% degree of disability according to the doctor of the *Sozialministeriums* (Ministry of Social Affairs) service.

¹⁰⁰ 'euro-key – Österreichischer Behindertenrat', accessed 25 October 2022, <https://www.behindertenrat.at/euro-key/>.

“If the degree of your disability has not already been determined and evidenced by an official assessment, notification or decision, a doctor from the relevant regional office of the *Sozialministeriumservice* will assess the degree of your disability. As far as possible, the doctor will not carry out a physical examination to do this; they will assess your disability on the basis of available medical findings/opinions in accordance with the *Einschätzungsverordnung* (Assessment Regulation).”¹⁰¹

Essentially, you would have to be very ill to qualify for a disability card. This idea also extends to whether psychotherapy treatments are covered by insurance.¹⁰² This also assumes the doctor will listen to you, will treat you, or knows how to speak to you.¹⁰³

What is especially telling about the discourse around accessibility, is that access is often framed as

¹⁰¹ ‘Disability Identity Card’, [oesterreich.gv.at](https://www.oesterreich.gv.at) - Österreichs digitales Amt, accessed 4 November 2022, https://www.oesterreich.gv.at/en/themen/menschen_mit_behinderungen/behindertenpass.html.

¹⁰² ‘Psychotherapie’, Österreichische Gesundheitskasse, accessed 4 November 2022, <https://www.gesundheitskasse.at/cdscontent/?contentid=10007.870222>.

¹⁰³ James Tapper, ‘Fury at “Do Not Resuscitate” Notices given to Covid Patients with Learning Disabilities’, *The Observer*, 13 February 2021, sec. World news, <https://www.theguardian.com/world/2021/feb/13/new-do-not-resuscitate-orders-imposed-on-covid-19-patients-with-learning-difficulties>.

something that is at the expense of other things, especially when balancing for other disabilities and aesthetics. It creates a false dichotomy that pits disabled people and their needs against other disabled people, and non-disabled people and their needs, when the needs of either people do not necessarily contradict. An example of this dichotomous nature at play is the Wikipedia article for tactile pavement, which has a section called Opposing Views¹⁰⁴. It references two articles that actually call for the balancing of disability needs, along with tangible alternatives. Shannon Coe concludes in their article “The pros and cons of truncated domes, should one disability trump another?”,

“Even though we should accommodate the needs of all people with disabilities, we should also “share the road.” Instead of putting truncated domes all around curb ramps or storefronts, I suggest leaving sections without truncated domes so people in wheelchairs can easily access those areas. This small change can make a huge difference in the safety of people with mobility impairments.”¹⁰⁵

Bryan Bashin, in his comments against the

¹⁰⁴ ‘Tactile Paving’, in *Wikipedia*, 29 August 2022, https://en.wikipedia.org/w/index.php?title=Tactile_paving&oldid=1107303377#Opposing_views.

¹⁰⁵ Shannon Coe, ‘Ability Tools Weekly: The Pros and Cons of Truncated Domes, Should One Disability Trump Another?’, *Ability Tools Weekly*

proposed plastic mats, not only suggests a different design that accommodates wheelchair users and blind stick-users, he takes it a step further and asks for better city planning for pedestrians that would also benefit sighted and non-sighted people alike.¹⁰⁶ While “opposing views” can mean criticisms, “opposing” can be understood as “opposite” or “against”. While there is disagreement between the designer and user on the implementation of tactile pavements, the section title can and does misrepresent what Coe and Bashin are actually saying in their articles.

An example of a design choice that Bashin asks for, is one that breaks the aforementioned dichotomy, by acknowledging that disability is fluid and comes in a spectrum, and actively includes disabled people as participants in street traffic. Their inclusion as an exemption from the *1960 Vertrauensgrundsatz in Straßenverkehrsordnung* (Principle of Trust in Traffic Regulation) acknowledges not only their participation in traffic, but also that drivers must exercise caution.¹⁰⁷ The underground trains in Vienna, Austria have visual and audio cues on the next stop, and on which side to exit according to the direction of the train.

(blog), 28 March 2012, <https://atnetworkblog.blogspot.com/2012/03/pros-and-cons-of-truncated-domes-should.html>.

¹⁰⁶ Bashin, ‘Truncated-Dome Threat Still Looming’.

¹⁰⁷ ‘§ 3 StVO 1960 (Straßenverkehrsordnung 1960), Vertrauensgrundsatz. - JUSLINE Österreich’, accessed 23 January 2023, <https://www.jusline.at/gesetz/stvo/paragraf/3>.

Not Just Bikes's video *Crossing the Street Shouldn't Be Deadly (but it is)* highlights the difference between American Car Infrastructure and Netherlands' Car Infrastructure, specifically that American traffic systems prioritise cars, while the Netherlands' prioritises pedestrians. A physical example of this is that when crossing the street in the United States, the pedestrian floors lower down into the car streets, as if you are entering the car's domain, whereas in the Netherlands they combine the speed bump and pedestrian crossing and keep the pedestrian pavement level is as if cars are entering the pedestrians' domain. Additionally, the speed bump already forces drivers to slow down as Not Just Bikes puts it, "physics is more convincing than signs". While Vienna does not have many examples of this exact infrastructure, they do exist around the city.



Figure 6.1 - An image of the Biberstrasse and Angewandte Postsparkasse at Georg-Coch-Platz 2 Building. It shows a speedbump level with the pedestrian crossing.

This dichotomous nature is also seen by how assistive technology does not become a universal item until it can become accessorised by the public. For example, glasses are technically a disability aid, but it does not register as one because they have become accessible and also fashionable. While I could wear contact lenses, I find wearing glasses more comfortable and I can choose the frames. Someone who is, by all intents and purposes, blind without them can also exercise that choice.¹⁰⁸ There is an aversion in the media against people who wear glasses, especially in the makeover montages, which is when eye contacts come in, but at the same time, glasses have become fashion pieces of an outfit or design choice in a character. An example of a fashionable glasses wearer is the cast of characters from the game *Bayonetta*, where glasses are a main component of their design.¹⁰⁹ In a similar vein, another example is clothes, specifically creating fashionable and functional clothes. While they are clothes and assistive technology that cater towards disabled people, that does not mean that other people are not catered to or that it would not fit non-disabled people. *Unhidden Clothing* and *JAM* the label have clothes that are fashionable and functional with disabled models. Kei Hirabayashi, a fashion designer, designs his clothes to be usable for wheelchair users, including specific zippers

¹⁰⁸ Ingri Ørsal Skogsrød, 'Empathy and Aesthetics: Combating Stigma in the Design of Assistive Products'.

¹⁰⁹ Shimazaki Mari, 'Designing Bayonetta', PlatinumGames Official Blog, 17 April 2009, <https://www.platinumgames.com/official-blog/article/1278>.

and buttons for ease of use.¹¹⁰

Disabled people can and have adapted to various situations, especially with the internet, technology and modifications (or mods). The additional collaborative potential with the internet and tech allows people outside of it to participate. It is also imperative that disabled people are connected as they are more likely to be isolated¹¹¹ and so that they can exchange information on how to hack systems, from speaking to your doctor about pain in a way that they would listen¹¹², to making eating simple by using a tray¹¹³. An example is Ryder Carroll's

¹¹⁰ 'Sustainable Adaptive Fashion Brand - Unhidden Clothing', Unhidden, accessed 23 January 2023, <https://unhiddenclothing.com/>; Danielle Kutchel, '(Ad)Dressing Disability: The Importance of Accessible Fashion', Pro Bono Australia, accessed 23 January 2023, <https://probonoaustralia.com.au/news/2022/09/addressing-disability-the-importance-of-accessible-fashion/>; *Accessible and Inclusive Fashion: Hirabayashi Kei / Representative Director, Japan Persons with Disabilities Fashion Association - Direct Talk | NHK WORLD-JAPAN On Demand*, accessed 23 January 2023, <https://www3.nhk.or.jp/nhkworld/en/ondemand/video/2058895/>; 'JAM the Label', JAM the label, accessed 23 January 2023, <https://jamthelabel.com/>.

¹¹¹ AbleGamers Charity, 'The Prevalence of Social Isolation Among PWD (And How To Combat It)', *The AbleGamers Charity* (blog), 4 October 2022, <https://ablegamers.org/the-prevalence-of-social-isolation-among-pwd-and-how-to-combat-it/>; Thomas C. Weiss, 'Social Isolation Due to Disability', *Disabled World*, 3 April 2011, <https://www.disabled-world.com/disability/blogs/social-isolation.php>; 'Why Loneliness Affects so Many Disabled People', British Red Cross, accessed 23 January 2023, <https://www.redcross.org.uk/stories/health-and-social-care/social-care/why-loneliness-affects-so-many-disabled-people>; Andrew Pulrang, 'Disabled People Have Unique Perspectives On Solitude', *Forbes*, 25 March 2020, <https://www.forbes.com/sites/andrewpulrang/2020/03/25/disabled-people-have-unique-perspectives-on-solitude/>.

¹¹² Pat Anson, 'A Weird Trick to Get Doctors to Listen to You', *Pain News Network*, 4 November 2022,

Bullet Journal System. In his article in collaboration with Human Parts, he explains,

“I developed the Bullet Journal (BuJo) Method as a strategy to help myself get better at catching the rain. I started by trying to figure out ways to feel less overwhelmed by the daily deluge of data. Every now and again, something — keeping short form notes, or pairing them symbols — would work. Then another thing — creating an index — would work, then another. It provided a simple process that helped me capture, filter, and channel information in a way that finally felt natural to my hyperactive mind.”¹¹⁴

This simple aid that he created for himself blossomed into a community with unique ideas and interpretations on how to track information that made sense to them, whether simple and minimalist like Carroll’s or elaborate decoration. It has become mainstream.

For people who cannot go outside and need to stay home, another way of getting human interaction is through online chats, and Virtual Reality or VR has

<https://www.painnewsnetwork.org/stories/2022/11/4/a-weird-trick-to-get-doc-tors-to-listen-to-you>.

¹¹³ *Tray Eating!*, TikTok, 2022, <https://www.tiktok.com/@nutmegan17/video/7161923304629095722>.

¹¹⁴ Ryder Carroll, ‘How ADHD Helped Me Create the Bullet Journal Method’, *Human Parts* (blog), 25 November 2019, <https://humanparts.medium.com/inside-adhd-55b9618cd708>.

become a means of communication, such as virtual spaces like VRChat and Metaverse. VR technology has advanced enough to read the hand and body motions accurately. A *Syrmor* video demonstrates this communication with signing, specifically American Sign Language or ASL. The video opens with a silent anime girl signing her childhood, with ocean waves in the background. The video continues more into the deaf community in VR Chat, showing an interpreter standing next to the priest at a VR Christian sermon. Syrmor and co. are invited into the deaf community hubspace where boards show deaf etiquette, how people assign deaf names, how to sign basic sentences, and spelling one's name in ASL. Signing in VR is difficult due to hand coordination, fine motor skills, and no visual on the face, all important components to ASL. There are also different VR Headsets on the market with varying degrees of sensitivity. So what the VR deaf community did was that they created a dialect of ASL for those who have general VR (or just limited movement) whereas Index VR is for standard ASL.¹¹⁵ Adding modifications on VRChat has a strong community, with user created mods that improve Quality of Life such as auto-captions for when people speak, stability, and body tracking is common. But when VRChat's developers updated the security of the game with an anti-cheat, this also included the removal of user-created content, which severely impacted disabled

¹¹⁵ *Deaf Anime Girl In VR Talks About Getting Bullied*, 2019, <https://www.youtube.com/watch?v=jk8qz889Mok>.

users. The disabled community has asked the developers to implement accessibility features, and they were not implemented until large backlash against the security update.¹¹⁶

Social media can be made accessible through its functions, such as Tumblr's tagging system, which allows people to curate and organise their experience, but also for health and safety, such as flashing lights, loud noises, and trigger warnings. They also have recently added a button to show alternative text captioning to their images in 2022, and have had the feature on the iOS and Android App since 2019.¹¹⁷

¹¹⁶ *VRChat Screwed Over Disabled Players (But The Devs Are Trying to Fix It)* - Access-Ability, 2022, <https://www.youtube.com/watch?v=nICVLrnXgNE>.

¹¹⁷ changes, 'Friday, May 27th, 2022', Tumblr, *Tumblr* (blog), 27 May 2022, <https://changes.tumblr.com/post/685426330509180928/friday-may-27th-2022>; staff, 'Hey!', Tumblr, *Tumblr* (blog), 6 August 2019, <https://staff.tumblr.com/post/186817510725/hey-good-news-you-can-now-add-alt-text-to-every>.

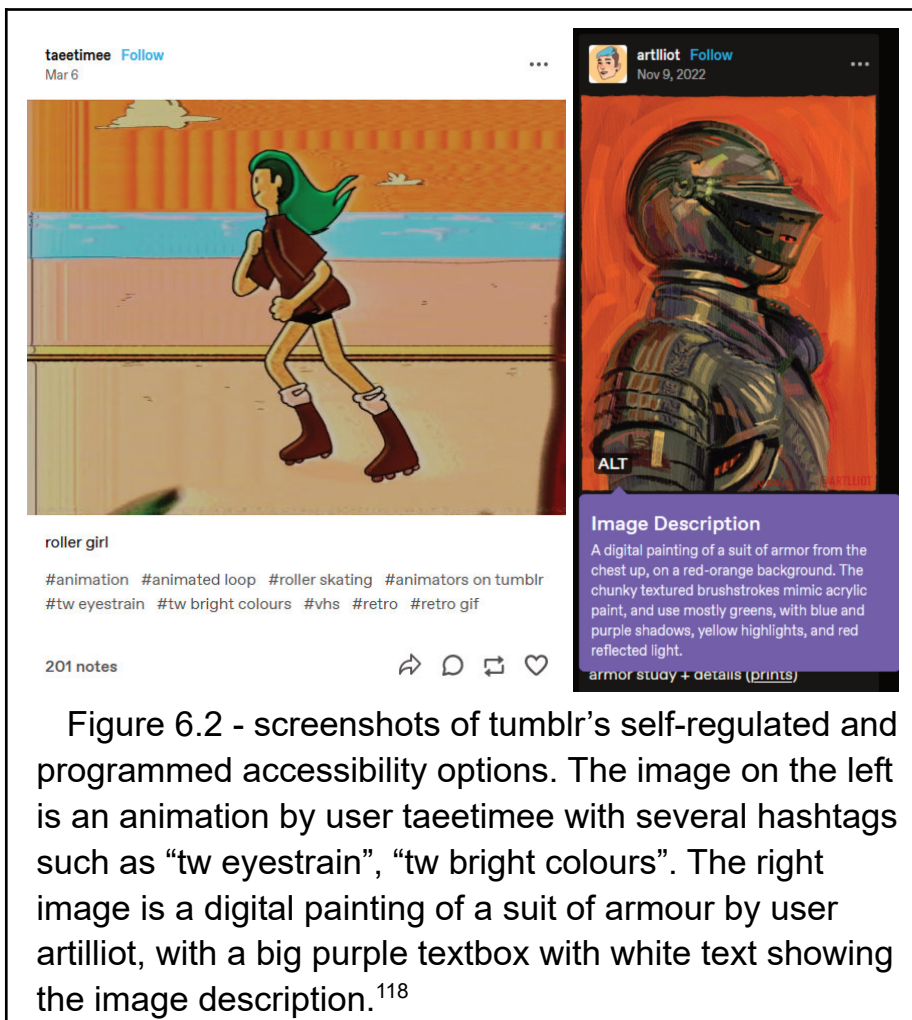


Figure 6.2 - screenshots of tumblr’s self-regulated and programmed accessibility options. The image on the left is an animation by user taeetimee with several hashtags such as “tw eyestrain”, “tw bright colours”. The right image is a digital painting of a suit of armour by user artlliot, with a big purple textbox with white text showing the image description.¹¹⁸

Twitter has alternative text features as well and has improved those features in an April 2022 update. Additionally, some game companies have decided to add

¹¹⁸ taeetimee, ‘TAEETIMEE’, Tumblr, *Tumblr* (blog), 6 March 2023, <https://taeetimee.tumblr.com/post/711074002473533440/roller-girl>; artlliot, ‘Illustration & Concept Art’, Tumblr, *Tumblr* (blog), 9 November 2022, <https://artlliot.tumblr.com/post/700471341258817536/armor-study-details>.

these alt texts for their tweets, such as the *Resident Evil* Games Twitter.¹¹⁹

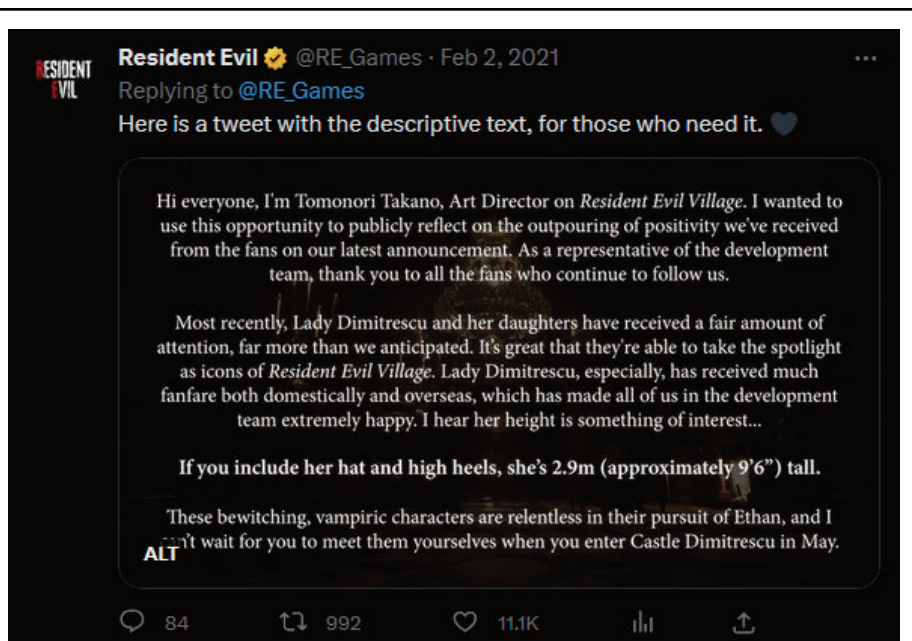


Figure 6.3 - A text screenshot of *Resident Evil* Games's official Twitter. Art Director of *Resident Evil Village* Tomonori Takano reveals height of the antagonist Lady Dimitrescu.

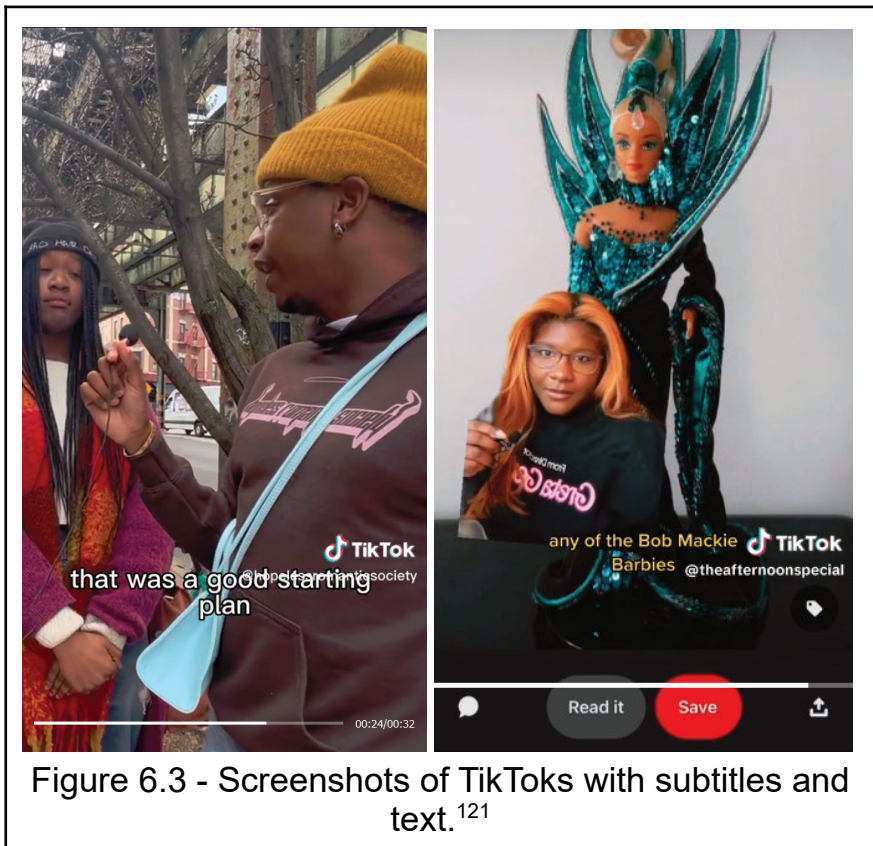
¹¹⁹ Resident Evil [@RE_Games], 'Here Is a Tweet with the Descriptive Text, for Those Who Need It. ❤️ <https://t.co/BR1Ydt5buP>', Tweet, *Twitter*, 2 February 2021, https://twitter.com/RE_Games/status/1356403834269138945; Twitter Accessibility [@TwitterA11y], 'As Promised, the ALT Badge and Exposed Image Descriptions Go Global Today. Over the Past Month, We Fixed Bugs and Gathered Feedback from the Limited Release Group. We're Ready. You're Ready. Let's Describe Our Images! Here's How: <https://help.twitter.com/en/using-twitter/add-image-descriptions>', Tweet, *Twitter*, 7 April 2022, <https://twitter.com/TwitterA11y/status/1512191972856975364>.

Adding accessibility text to media is a lot of labour, and outsourcing is an expensive option. Facebook and YouTube are one of the few platforms to have automatic captions when official captions were not available, and have alternative text editors after upload, and YouTube has removed community captions which lets other users add captions to a video. Twitter has launched this auto-captioning feature with mild success.¹²⁰

While you do not have to add subtitles on TikTok, the in-app text editor is connected to text-to-speech. So if you decide to enable text-to-speech on a text, there won't be a problem. Additionally, you can enable

¹²⁰ YouTube, 'Saying Goodbye to YouTube's Community Contributions Feature after September 28, 2020 - YouTube Community', Youtube, 31 July 2020, <https://support.google.com/youtube/thread/61967856/saying-goodbye-to-youtube%E2%80%99s-community-contributions-feature-after-september-28-2020?hl=en&msgid=62048736>; *YouTube Is Officially Getting Rid Of Community Captions* | Rikki Poynter, 2020, <https://www.youtube.com/watch?v=wh5sxszpGog>; Twitter Accessibility [@TwitterA11y], 'As Promised, the ALT Badge and Exposed Image Descriptions Go Global Today. Over the Past Month, We Fixed Bugs and Gathered Feedback from the Limited Release Group. We're Ready. You're Ready. Let's Describe Our Images! Here's How: <https://help.twitter.com/en/using-twitter/add-image-descriptions>'; *How to Add Captions While Uploading and Editing Your Videos*, 2021, <https://www.youtube.com/watch?v=rB9ql0L0cUQ>; Facebook, 'How Does Automatic Alt Text Work on Facebook? | Facebook Help Center', accessed 21 March 2023, <https://www.facebook.com/help/216219865403298>; Twitter Support [@TwitterSupport], 'Where Are Video Captions When You Need Them? They're Here Now Automatically on Videos Uploaded Starting Today. Android & iOS: Auto-Captions Will Show on Muted Tweet Videos; Keep Them on When Unmuted via Your Device's Accessibility Settings Web: Use the "CC" Button to Turn on/off <https://t.co/IHJAI31lvX>', Tweet, *Twitter*, 14 December 2021,

auto-captioning and edit the captions before uploading. Along with the auto-captioning is the translation tool, though with low success. The main takeaway is that the developers of TikTok have created an infrastructure where, adding subtitles is easy, and additionally creating a culture where subtitles on a TikTok is normal, not disruptive, and part of the default TikTok experience.



¹²¹ *What's the Craziest Lie You Ever Told to a Man?*, 9:16, 2023, <https://www.tiktok.com/@hopelessromanticsociety/video/7214515957958528298>; *Barbie the Movie CAN NOT Have a Boring Red Carpet.*, 9:16, 2023, <https://us.tiktok.com/@theafternoonspecial/video/7219100514149993771>.

This can also be said for many other user design situations, such as in video games. *Extra Credit's* video on Accessibility in games goes into this further. Building accessibility early in the process, such as implementing text and character systems for subtitles to accommodate different font sizes, is not only efficient for the developer, the late-development costs are lower.¹²² They point out specifically the naming of difficulty settings, and to not mock players for choosing easier settings. Jim Stephanie Sterling from *Jimquisition* goes into detail around the conversation of accessibility in games, specifically around *Gamer Pride*. They mentioned points that parallel the ableist ideas intertwined in the concept of laziness, an example being conflating difficulty settings with not putting enough effort at performing skill. Stephanie rightly points out the all too familiar hypocrisy present,

“For these [people], video games are purely about skill and feeling superior, and they can often be heard whimpering, ‘not all games are made for everybody’ to justify their attitude. It’s weird that they think we should accept a game’s decision to be exclusionary, but seem unable to accept a game’s decision to be inclusive. Apparently, respecting a developer’s vision and not demanding they cater to everybody is only something they believe in when that vision makes them the sole beneficiary.”¹²³

¹²² *Accessibility - The Curb Cut Effect - Extra Credits*, Extra Credits, 2017, <https://www.youtube.com/watch?v=PJoax1Z1x4Y>.

To circle back to libraries, when designing for the people, the characteristics that all libraries have in common is their integration into public space and its various facets. They can have services like literacy classes to database searching, be open for meetings and activities, as well as just a space to sit in and relax. An example of this in its early stages is the Misr Public Library in Cairo. I say early because the official webpage for this library at the moment is a Facebook Page and its official webpage is not accessible as of the writing of this thesis.¹²⁴

¹²³ *Accessibility And Gamer Pride (The Jimquisition)*, The Jimquisition, 2023, <https://www.youtube.com/watch?v=h05Cr7NHZWU>.

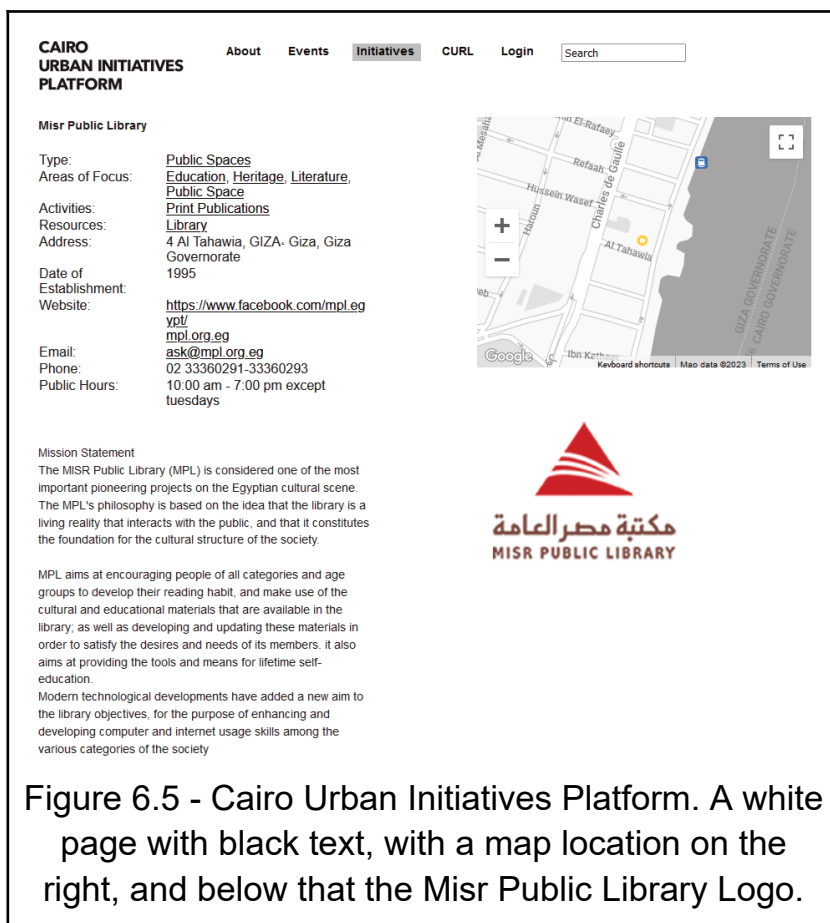
¹²⁴ 'MISR Public Library "MPL" مكتبة مصر العامة', accessed 6 March 2023, <https://www.facebook.com/mpl.egypt>.



Figure 6.4 - Facebook About page for Misr Public Library, detailing their mission statement.

That said, in the Cairo Urban Initiatives Platform, the Misr Public Library is listed as a Public Space initiative with Education, Heritage, and Literature as its focus. The MPL is also considered a project as part of the cultural scene, where one of the primary objectives is cultivating a space for self-education, which includes developing computer literacy skills.¹²⁵

¹²⁵ 'Misr Public Library | Cairo Urban Initiatives Platform', accessed 6 March 2023, <http://cuip.clustermappinginitiative.org/en/directory/misr-public-library>



An example of a library that is well integrated into its space is the Seattle Public Library, which has not only many accessibility options for low vision, but also informs people of their rights, has free services from learning new skills to free start-up business consultations to civic and social services, outreach and social justice.¹²⁶

¹²⁶ The Seattle Public Library, 'Programs & Services', The Seattle Public Library, accessed 21 March 2023, <https://www.spl.org/programs-and-services>.

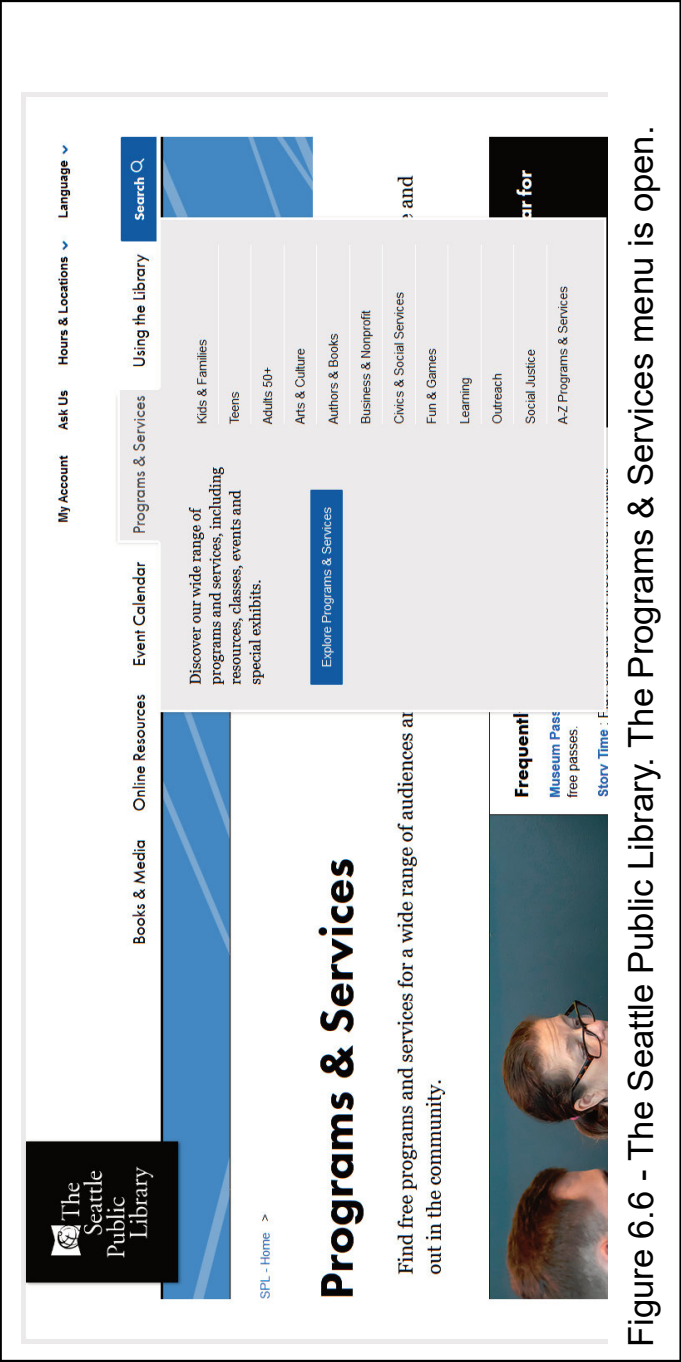


Figure 6.6 - The Seattle Public Library. The Programs & Services menu is open.

In summary, often for disability, you not only have to declare your existence, you also have to prove that you are deserving of space, and the same can be said in education, health, and commerce. Disabled people have unique experiences that should be accounted for when designing spaces and services, and how you design spaces and items affects how they and everyone else interact in that space. An example of a more welcoming physical space would be placing stairs and elevators next to each other at most, and near each other at the very least, and making accessible entrances also be main entrances or placing accessible entrances next to main entrances in an understandable and intuitive way with no requirement of an outside person to enter.

An example of this in service would be placing the ticket machines both high and low and are simple to understand, and an example of this in catalogue and media selection would be having a variety of content for various audience groups in mind. The Xbox game store currently has a comprehensive tagging system for accessibility features and games and software will not receive an accessibility tag if it's not complete. For example the subtitles tag will not be added if the software only has subtitles for dialogue. This forces a standard that developers need to reach for their game to be considered accessible and reliable consistency for disabled

players.¹²⁷ The exact opposite would be placing entrances in a confusing, disorienting way. For example, the United Nations Office of Vienna are 22-floor buildings that are interiorly identical in the office floors, and going from one main building to another is only possible on specific floors. Although it has stairs, the main way of navigation is by elevator, but during an emergency, the elevators are out of order. An exact opposite for catalogue would be having no content warnings (which is different from age-ratings), and in information, it would be making the system needlessly complex.

¹²⁷ *Video Games Need Accessibility Standards: 2023 - Access-Ability*, 2023, <https://www.youtube.com/watch?v=u8L6VJQqRUU>.

Conclusion

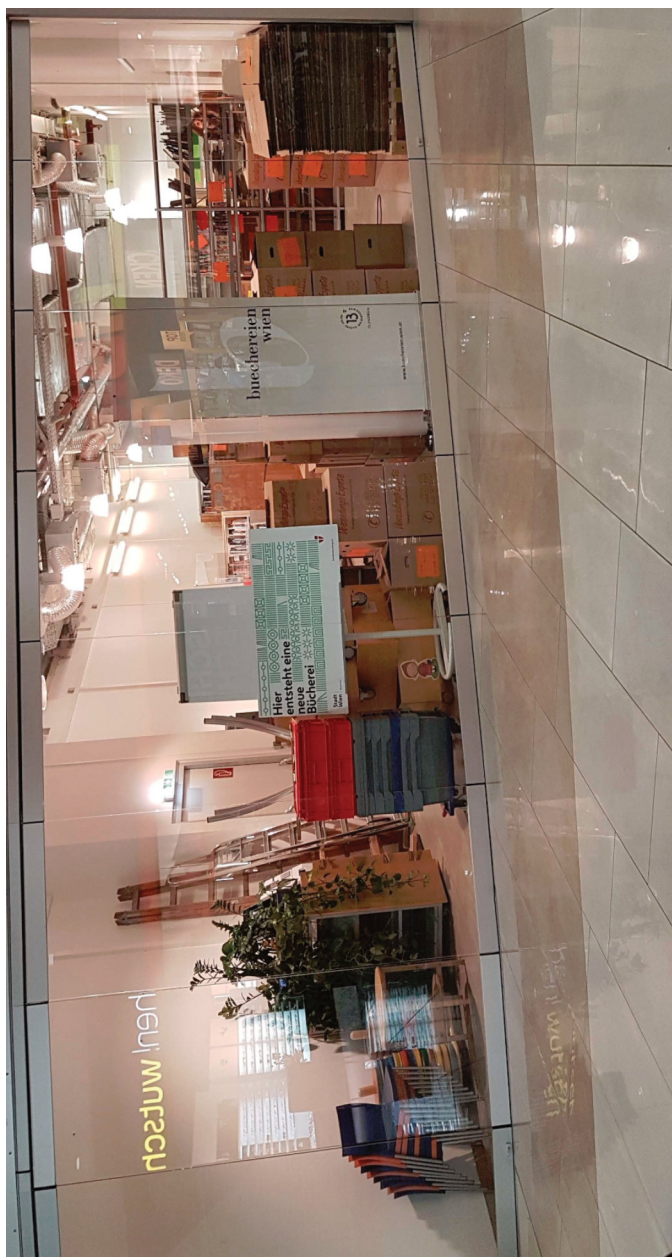
In the introduction, I said this thesis was not about what is the best design for accessibility, but rather accessibility as a concept in our social fabric. Looking at the results of my research toy and the sentiments of disabled people, what I can surmise is that the current system that Vienna has does not facilitate accessibility in a concrete pipeline. While this scope is only about libraries and what you need when building one, those factors are shared with the other public institutions. These include a sense of belonging and participation, ease of use, and independence. Governments have a responsibility to make buildings, services, and information accessible, yet the road to that is not just unclear. There are courses that you can take about accessibility at university studies, the law includes disabled people and has protections and specific rights for them, various other governmental services have disability and accessibility focuses, but the bridge between them and what the public

knows is not evident. Accessibility is framed as “need to know basis”: the courses you can take about accessibility are not mandatory, the information that you need to find in regard to accessibility and disability support is not always clear or transparent, and - in this case - the *Stadt Wien* library is only seen as a functional institution for education despite events and activities taking place there.

This is especially damaging for anyone that wishes to engage with the public sector in any way such as administration, policy, and construction; by making accessibility a small topic, those who do learn about it are people who are already interested in it and understand its importance. The awareness about and of accessibility can and has already been cultivated through other means and experiences, myself being an example of that.

While buildings and physical and sensory disability is the scope of this thesis, this can also be applied to various fields and I hope that this thesis is a jumping board for future criticisms. I do not think people are inherently ableist, rather that we live in a society that has ableist (among many other prejudices) ideas taught to us, and they hurt more than just those who are targeted by them. Similarly, the opposite is true. Creating environments and products that accommodate specific needs accommodates many others. If we truly did not care about others, we would care about accessibility, let alone basic human rights, and the structures we do create would be functional only at best.

Being kind is good, actually.



A photo of a Stadt Wien library, opening soon in Citygate Mall by Aderklaaer Strasse.

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