A Pattern Language of Platform Urbanism

PAUL SEBESTA

Key lock boxes

Key lock boxes appear in the street space of many cities. They mostly provide the keys to rental apartements and serve to avoid contact between landlord and tenant and to enable flexible collection of the keys.

MAXIMILIAN LIKO
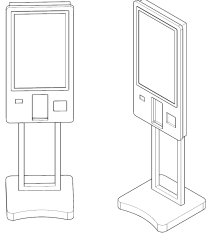
Machine-readable codes

The instinct to connect with the digital world directly and make this connection seamless through elements within the physical world seems to be a core principle of the platform city. Machine-readable codes in physical form, such as QR codes are useful elements to facilitate this.
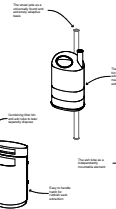
Network
160

JOHANNA MAGGAUER

Self Service Ordering Kiosk

With their sleek customable design self service ordering kiosks have become natural part of platform cities.
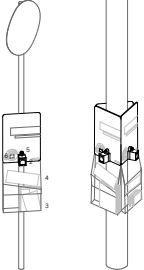
PHILIPP JAINZ

The public litter bin

The public litter bin is part of the municipal service. It is accessible to everyone, at any time of the day and in any part of the city. Waste as a global variable, fuelled by consumer behaviour, a feature of a functioning administration and consequently, the public litter bin has become a popular canvas for street art, due to its status as a universal symbol.

ANDREEA AVRAM

Sonntagsstandl

The Sonntagsstandl is a newspaper carrier attached to a pole. By inserting the coins into the metal box, the newspaper is paid for and can be taken from the unsecured plastic pouch.

EDRA GJINOLLI

FOODORA Backpack

The neon-pink Foodora bag is a common sight in the city, carrying food and connecting people through delivery services. Its simple design reflects the quick, everyday movement of the gig economy.
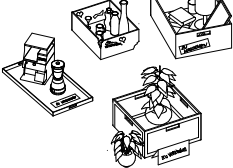
KATALIN

Free-Stuff-Boxes

Free-Stuff-Boxes are open containers typically placed on the roadside in urban areas, where people leave items, they want to give away. They are usually simple cardboard boxes or other containers found inside a household and put together by private individuals. These containers are often improvised, with handwritten or glued-on labels that clearly indicate the contents are intended to be taken away for free.
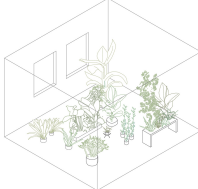
This elaboration refers to the phenomenon of the German „Zu-Verschenken-Kisten". Since the term was translated into English, I will use the informal term „Free-Stuff-Boxes".
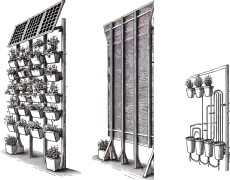
SIMGE PEHLIVAN

Houseplants

Representing a perfect duality between aesthetics and economy: collecting houseplants in various shapes is an act to bring moments of tranquility in hectic lifestyles.
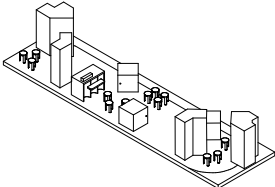
ATILLA BOYAN

Vertical Garden Complexes

This essay will try to show, from the perspective of their ecological, social and economic implications, what VGCs mean for platform cities. It will expose their challenges and opportunities, and sketch possible ways forward to truly sustainable and inclusive urban futures.
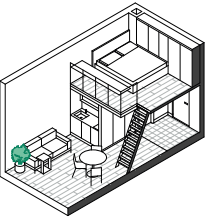
CLARA SCHMIEDEHAUSEN

Pop-Up(s)

Pop-Up is originally a marketing term that is used in a wide variety of areas in the context of space and commercialization. First and foremost, it refers to quickly (or immediately) available, temporary space that can ideally be used adaptively and multifunctionally. This space fulfills the short-term consumer-wishes of the customer and responds to their real needs, or the needs desired by the occupant of the space. It can be described as a mixture of digital and physical space. It is therefore a temporarily real, locatable space that follows the logic and structure of our capitalist system. A distinction can be made between formal Pop-Up and informal Pop-Up.
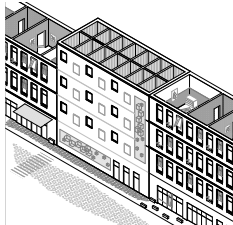
STEFANIA-IOANA MELEAN

Micro Apartments

The phenomenon of Micro Apartments has gained a lot of attention amongst students and young adults in their twenties or thirties in recent years. They come as a great alternative to having roommates to be able to live close to the city center.

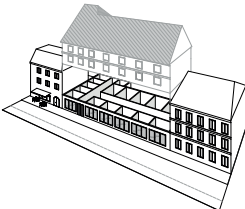DAVID KERNSTOCK

Storage Houses

Our mobile society's hunger for consumption results in many symptoms. Self-storage houses are an urban development option, which find space in the middle of our cities to give things a home.

MIA GILLITZER

Storebox

Company that offers digital self-storage solutions. Customers can reserve their storage boxes via an app and access them around the clock. They are usually located in the first floor zones ofexisting buildings.
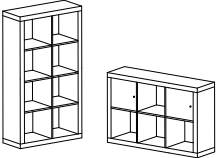
FLORIAN RÖDEL

Parcel station

Parcel stations are appearing in cities everywhere, offering a convenient solution to e-commerce demands and are a visible, physical sign of platform economy.

SUSANNE GERZER

IKEA Kallax shelf

The KALLAX shelving is one of IKEA's bestsellers. The modular systemmakes it very easy to adapt to individual requirements. It is very affordableand has a simple and timeless design and is used in a variety of scenarios.

ELIAS ROHER

Transnational Home Swapping Platform

Initially designed for one-to-one home exchanges or smallscalerentals, platforms like Airbnb have evolved into key playersin the global accommodation market, reshaping the way we travel.

PLATTFORM

JONAS LEIMER

Dating Apps

Digital platforms for fostering sexual or romantic connections in digital and physical space. On a App Interface platform users can swipe through algorithmic curated potential partners.

ABIGAIL TROYA

Friendship Apps

Friendship apps are becoming increasingly popular in modern life. They have emerged in response to growing social disconnection and the difficulty of forming new relationships in a world dominated by work and technology.

SARA LLOZANA

Instagram Feed

Instagram is a widely-used American social networking service and its main focus is photo and video sharing. This app which is owned by Meta Platforms, enables users to apply filters, up-load media, and categorize content using hashtags or tags (Wikipedia contributors, 2024).

BESJAN BYTYCI

TIK TOK Feed

TikTok's feed is a groundbreaking digital pattern that reshapes cultural production and user interaction, blending personalized algorithms with addictive short-form content. It democratizesand visibility and creativity, yet provokes critical debates on its role in amplifying trends, shaping societal norms, and fostering algorithmic dependencies.

Key lock boxes

Key lock boxes appear in the street space of many cities. They mostly provide the keys to rental apartements and serve to avoid contact between landlord and tenant and to enable flexible collection of the keys.

3,6 cm   Ø1,0 cm

4,9 cm

4,4 cm

6,0 cm

11,9 cm

8,2 cm

zinc alloy
door hinge at bottom
fastening with bracket
weight 0.9 kg
combination lock
lockable, without insertion slot
4-digit user codes

RESET

room for up to 20 keys or 14 plastic cards

Key lock boxes

In recent years, the proliferation of short-term rental platforms like Airbnb has transformed the way people travel and find accommodation in cities. Starting from a very personal renting out of private apartments while the owners were on holiday themselves or were just interested in meeting new people from other countries – in a way like couch surfing – the platform Airbnb today has become much more professionalised with a large proportion of the apartments on offer solely built for Airbnb. With that not only the apartments themselves changed from a private individual space to a highly standardised interior hotel like style, also the the role and interaction between landlord and tenant has changed completely. While in the past one had to arrange a meeting with the landlord to be shown the apartment and handed the keys today this process has become much more impersonal and efficient. One of the central innovations enabling the smooth handling of the handover of the apartment that also made a personal interaction between landlord and tenant obsolete is the use of key lock boxes. By simply putting the keys to the apartment in a key lock box somewhere in publicly accessible space and communicating the numeric or digital access key to the box a human interaction has become redundant. These devices, while seemingly simple and inconspicuous, have therefor had profound implications for urban environments and are spreading further and further into urban areas. Although Key Lock Boxes are only a small technical solution for a landlord, they still have a deeper significance for developments in platform based economics and individualised travelling, as well as for social interaction and neighbourhood structures.

Key lock boxes are generally small, secure containers designed to hold physical keys or access cards. They are typically made from durable materials like steel or heavy duty plastic and feature locking mechanisms that range from traditional combination dials to app-controlled smart locks. These boxes can be mounted on walls or secured to door handles. For example key lock boxes can often be found near the main entrance door to a multi-apartment building or next to the intercom system. But just as much they can be mounted on fences or handrails or simply any kind of structure that fits the mounting mechanism.

The most common system for key lock boxes is shown in the drawing. It consists of a padlock system to mount the box to a permanent structure like a hook, a rail or a doorknob, but also features a wall mounting system that can be accessed from the inside of the box. Additionally it features a physical four-digit combination dial with an opening button and some weather sealing covers as well as the container space for storing keys or key cards behind a safe door. Furthermore there is a mechanism for releasing and mounting the padlock as well as a reset mechanism on the inside of the door to reset the combination lock. The shown model is made by the german manufacturer of security solutions "ABUS" and measures 16.8 cm in height, 8.2 cm in width and 4.4 cm in depth and comes with storage capacity of up to 20 keys or 14 plastic cards. It is made out of a combination of zinc alloy and heavy duty plastic and weighs around 0.9 kg. The padlock shackle has a diameter of 1 cm and can hold objects with a diameter of up to 3.6 cm. The website states different use cases for the lock such as "for frequently changing groups

of people such as tradesmen, holiday guests, vehicle rentals, nursing staff and the like."[1] While it seems that there are many different uses for the product, it is the holiday guests for whom the key lock boxes are most often used. The reasons for this are some of the advantages that the product brings from the landlord's point of view.

Key lock box manufacturers
The market for key lock boxes is huge, with numerous manufacturers catering to different needs and budgets. Some of the most renowned producers are for example companies like ABUS or Burg Wächter. These companies are specialised in the field of security products such as locks and safes of any kind or home security systems in general but now also offer key lock boxes as one product of their product range. The key lock boxes they offer are mostly non-smart devices that are quite affordable and simple to install and therefore very popular. They are also very approachable as they can be found in nearly every hardware store. But there are also companies that have made the key lock box or in further development often the smart lock box their main product, such as Master Lock or Igloohome. The company Igloohome for example has specialised in app controlled locks for example offer smart locks as their only product with a main focus on marketing them for short-term rentals. With claimed "25 M+ access credentials per year, 75,000 access credentials generated per day" and a distribution of ">100 cities […] such as Europe, North America, APAC and more"[2]. these companies are also gaining a huge knowledge of user action and are collecting enormous amounts of user data. Companies like Master Lock can even buy in at Airbnb to be listed as a purchase recommendation.
With the emerging development of AI technology and machine learning some advanced smart locks now even integrate features which allow the device to recognise users based on biometric data or smartphone proximity or can detect if an attempt is made to pick the lock and alert the owner.[3]
Aside from bigger specialised companies there is also a big market around amazon who is offering a vast amount of off-brand products that all look very much alike and are also likely to be marketed as lock boxes specifically for short-term rentals or Airbnbs in their product name.

Key lock boxes for short-term rental apartments
From the perspective of landlords key lock boxes have revolutionised property access for short-term rentals by offering significant advantages. Key lock boxes are fairly easy to use and come with a lot of flexibility and also save time handing over the keys compared to personal meetings. Hosts simply need to set a unique access code, which they share with their guests, often through the short-term rental platform's messaging system and once the guest enters the correct code or uses the app, the box opens, revealing the key. Some modern lock boxes even integrate with smartphone apps, allowing the host to remotely grant or revoke access. This straightforward mechanism has made key lock boxes an indispensable tool for Airbnb hosts. For hosts managing multiple properties, key lock boxes even simplify logistics, enable remote management and scaling up the profit of their business model. These benefits often get advertised with phrases like "You can save money. You can increase your income. You can reduce your workload.

[1] https://www.abus.com/uk/Consumer/KeyGarage-key-box/797-KeyGarage
[2] https://www.igloohome.co/
[3] https://speechify.com/blog/the-impact-of-ai-on-smart-locks-and-keyless-entry-systems/

You can increase your reviews and reputation as an Airbnb host by improving the guest experience and making things easier on yourself."[4] to convince host of buying the lock boxes and integrating them in their booking process.

There are lots of guides online on how to use key lock boxes and how beneficial they can be for a host. Articles with the title "The Ultimate Guide to Airbnb Key Lockboxes for Seamless Guest Experiences"[5] are trying to convince the readers of the benefits in using a key lock box, what options there are and how to properly use and maintain them. Host can even take the process of hosting if they take advantage of Airbnb management services like the platform Houst which take care of all the booking processes. These platforms also come with a service of offering their own key lock boxes with the offer to be free of charge for the host. The claim "Airbnb Lockbox is free for hosts. Guests pay $1.50 per guest stay, or $0.50 per guest stay if you're a superhost (one of Airbnb's highest-level host status)."[6]

So at the first glance, key lock boxes also offer these advantages to the tenants. For example, same as for the hosts they provide increased flexibility in terms of checking in and out of the apartment at different times of the day without the need to coordinate meetings with the host and even can be free of cost for the host. But apart from that, the widespread use of key lock boxes has led to unintended effects, particularly in densely populated urban areas. The increase in remote work for example has also increased the demand for short-term accommodations and a higher fluctuation of tenants in urban centres. While through this landlords may be profiting more, it also comes with negative side effects for the apartment owners as well as for the tenants and local residents. One of the most obvious risks is the risk of a key lock box being broken into and residents being harmed or the apartment being raided. However, there are also other risks, such as the issue of user data security or social problems of gentrification and conflicts among the residents of the neighbourhood. In a larger scale this higher fluctuation of tenants also intensifies the strain on housing availability and community relations in general.

Risks and issues of key lock boxes
As mentioned one of the most significant concerns with key lock boxes is their vulnerability to being manipulated. Although many models are designed to withstand physical attacks, there is of course no complete protection against damaging. Additionally, if the access code is shared widely or not changed regularly, unauthorised individuals may gain entry to the property. Such breaches can lead to theft, property damage or even personal harm. Examples from the United Kingdom show that key lock boxes often get targeted by burglars.[7] The BBC states that the Romsey Police "have urged residents with key safes outside their homes to install security lights, alarms and CCTV."[8] and furthermore quotes a spokesperson for Hampshire and Isle of Wight Constabulary who said "However, we are concerned that key safes fixed on walls next to front doors are more likely to be targeted than those fixed around the back of a house or in a more obscure location. […] To protect your home and belongings, consider relocating the key safe to somewhere less obvious and contact the company that makes your key safe and ask how it can be made more secure."[9] There are also recent reports on the platform "reddit"

[4] https://www.houst.com/blog/airbnb-lockbox
[5] https://hearthomes.ca/airbnb-key-lockboxes/
[6] https://www.houst.com/blog/airbnb-lockbox
[7] https://www.bbc.com/news/articles/c6pywedgg1po
[8] ibid.
[9] ibid.

about breached lock boxes in San Francisco where a user caught the burglars on video how they gained access to the keys from the lock box and entered the property.[10] That direct connection of key lock boxes next to the entrance door of the apartment building has finally led to the lock boxes being scattered around the city so that they can no longer be directly assigned to a specific building and also to the increased use of surveillance cameras in public space to monitor the entrances.

As many modern key lock boxes use app-based controls and collect and store data about access times of users this raises concerns about data security and privacy. Other than with a physical key app-based locking mechanisms can track every opening and closing action of the lock box mostly stored on a server of the lock producer. If this collected data is not securely protected or encrypted, there is a high risk of the data being hijacked and being misused by unauthorised people. There is also the chance of the locking signal being intercepted or read out in order to keep the doors of the apartment unlocked or to gain access to the apartment when the tenants are away.
In addition to unwanted intrusion by third parties, digital locking systems also pose the problem of possible monitoring of the movement of the tenant by the landlord. Apartment owners could completely monitor the presence or absence of tenants which would potentially violate the tenants' personal rights. This shows how delicate the balance between technological convenience and ethical considerations can be.

Gentrification driven by short-term rentals is a phenomenon that can be observed in many different cities around the world. As more and more properties are converted into Airbnb apartments, local residents are often facing rising rents and unavailability of flats for rent. Overtourism has become one of the major problems for touristic cities and has opened up many debates about tourism regulations in cities and has further led to different kinds of strategies how to handle the mass of tourists. Some of the strategies are for example entrance fees for specific parts of the cities for tourists or the regulation of cruise ship landings at specific ports. Key lock boxes in that case act as a visible symbol of this transformation process and can indicate the potential tensions between long-term residents of a city and short-term guest. Examples of Spain show how Airbnb has become a real problem for local residents. In Barcelona, one of the most popular tourist cities in Europe, tens of thousands of people are protesting against the rising rents. One of the reasons for this development is that "rental prices have also been driven up by short-term renters including tourists."[11] Y. Joseph Wilson and Hernn Muoz state in an article of The Independent. People often find themselves having to leave their long-term apartment for a potential renovation and new use of the building. "Protestor Samuel Saintot said he is ‚frustrated and scared' after being told by the owners of the apartment he has rented for the past 15 years in Barcelona's city center that he must vacate the premises. He suspects that the owners want him out so they can renovate it and boost the price."[12]
That feeling of injustice from the side of the local residents can lead to violent actions specifically against key lock boxes as a case in Seville shows. A report about the incident says "several apartment key boxes in Seville, Spain have allegedly been covered in

[10] https://www.reddit.com/r/sanfrancisco/comments/tfmi71/these_two_men_managed_to_open_the_lockbox_stole/
[11] https://www.the-independent.com/news/world/europe/barcelona-rotesters-spain-rent-overtourism-b2652864.html?utm
[12] ibid.

excrement. This development signals a disturbing escalation of anti-tourism sentiments in the city."[13] This case shows how an entire tourism-driven development in cities can be symbolised by inconspicuous physical objects like key lock boxes.

Since Airbnbs and the use of key lock boxes have become so popular these small devices have taken up a lot of space in the urban public environment. And since they have become so visible throughout the sheer mass of lock boxes in some cities that they became the target for protests and violent actions, the city administrations around the world have been forced to take action and respond to the development recently. On the one hand it hast to do with control over the renting out of touristic short-term apartments, since cities are no longer able to regulate and manage the amount of tourists in a city, and on the other hand key lock boxes often interfere with the historic image of a city if the lock boxes are mounted to historic sights for example or they could also just obstruct public pathways. As a result city administrations have been force to take action against key lock boxes in public space.

Regulatory responses to key lock boxes
In Australia key lock boxes have been a focal point in debates about urban regulations and local councils have implemented policies requiring the removal of key lock boxes from public spaces unless explicitly authorised. One of the first cities to do so was the City of Melbourne which banned lock boxes in public space. The official website of the City of Melbourne states "it is illegal to attach lock boxes (key safes) to council infrastructure as they can impede access to services, cause damage to property or obstruct genuine use of the structure. This includes attaching lock boxes to disused bikes locked to infrastructure. Removed lock boxes will be stored for two weeks, then they will be destroyed. Lock box owners can claim their property by contacting us and making an appointment. Proof of ownership will be required."[14] Similar discussions about banning key lock boxes in public space are held in many other different countries. Cities like Paris or Dublin are currently in the process of finding regulations about banning or restricting lock boxes. The most recent response to the topic can be seen in Italy in November 2024 where there have been regulations introduced in the most touristic cities like Florence, Venice or Rome. The Florence city administration recently released a 10 point plan for a "sustainable tourism and liveable city"[15] in order to ban key lock boxes in the UNESCO area, loudspeakers for touristic guides, implement limits on "atypical vehicles for tourist services" like golf carts and other measures. Also Rome introduced measures against key lock boxes. "In a new circular letter, the Ministry of the Interior in Rome clarified that the operator may only accommodate people with ID and that the personal details of guests must be reported to the local police station within 24 hours. The operator must meet the guests in person."[16] The ban on lock boxes is meant to be "a security measure for hosts to verify the identities of guests" according to the Italian Interior Ministry and furthermore "aimed to prevent 'safety risks in relation to the possible accommodation of dangerous individuals or those linked to criminal or terrorist organisations'."[17]

[13] https://www.yahoo.com/news/apartment-key-boxes-covered-poo-151649985.html?utm
[14] https://www.melbourne.vic.gov.au/maintaining-our-parks-and-open-spaces
[15] https://www.comune.fi.it/comunicati-stampa/turismo-sostenibile-citta-vivibile-la-giunta-approva-un-piano-10-punti
[16] https://www.derstandard.at/story/3000000247653/gegen-massentourismus-italien-verbietet-schluesselkaesten-mit-code
[17] https://www.independent.co.uk/travel/news-and-advice/italy-airbnb-key-box-ban-b2659320.html

New management platforms

Since many cities have banned key lock boxes or are considering doing so, short-term rentals hosts and rental platforms have come up with different solutions to provide keys in alternative ways. Finding alternatives to bypass that problem has led to the thriving of new platforms such as KeyNest or Keyninja which have specialised in booking processes, managing guest access and taking care of the key handover. These platforms often partner up with Airbnb in order to work together seamlessly. KeyNest builds up a local network of partnering business like cafes or stores where the keys to the apartment can be deposited and collected. For every deposit hosts have to pay a fee to the platform or buy a subscription for frequent uses. As a benefit for the hosts there is no need for a personal key lock box and the "mobile app system allows hosts to manage access, receive notifications, and track the keys' movements, ensuring the safety of their property and guests".[18] The platforms KeyNest or Keyninja even offer cleaning services and remote inspections for the apartments what makes the presence of the owner nearly obsolete.

Personal contact

What can clearly be observed is the fact that platforms like Airbnb dominate short-term rentals and the market of tourist accommodation in most of European cities. With that come numerous side effects like gentrification processes, rising rents, unmanageable streams of tourists and even obstructions in public space which lead to unrest among the local population and pressure the governments into taking action against these developments. The key lock box as a small utilitarian device has become a symbol of a global market development in the touristic industry and a physical target for locals to express their discontent towards intangible digital platforms. The question now comes up on how to proceed with the occurring tensions and what steps could be taken in order to find a balance between local interests and tourism again. City administrations have declared regulations against key lock boxes in public space but that probably only combats the symptoms and not the causes of that conflict. Attempts like in Italy where hosts have to meet the guest in person may be a more solution-orientated approach and could lead to a better relation between local residents and short-term renters. The platform industry itself gave an answer to the issue with even more interconnected and data driven platforms which seems to cure the problem at first sight but come with the risk of running into the same issues and developments as platforms are facing today already. Bigger key hubs could soon look like a mixture of parcel pickup hubs and self storage units which lead to uninhabited and anonymous ground floor zones and the lack of neighbourhood life in districts. To find a sustainable solution it seems inevitable to have personal contact between hosts and renters. May it be through the host itself or through residents – if a local community is more involved in the touristic field it could lead to more acceptance and even be beneficial to local economies rather than play into the hands of multinational platforms. One of the main problems is the separation of the two worlds in a sense that they just co-exist rather than co-operate. Co-operation on a personal level could make the use of key lock boxes obsolete and help reconciling the interests of locals and tourists and even be beneficial for a local economy as well as for a touristic experience.

[18] https://keynest.com/blog/airbnb-host-guide-5-alternatives-to-key-boxes-for-remote-check-ins

PAUL SEBESTA

Key Lock Boxes

fig. 1 key lock box, photo: author, 2024

fig. 2 key lock box, photo: author, 2024

HeartHomes
VACATION RENTALS WITH HEART

Services ▾   Pricing   About   FAQ   Blog   Contact   Key West ▾

HeartHomes > Company Blog > How To Airbnb > The Ultimate Guide to Airbnb Key Lockboxes for Seamless Guest Experiences

How To Airbnb, Industry News

The Ultimate Guide to Airbnb Key Lockboxes for Seamless Guest Experiences

fig. 3 guides on using key lock boxes, screenshot hearthomes.ca

amazon   Deliver to Austria   All ▾   Search Amazon   🔍   EN ▾   Hello, sign in Account & Lists ▾   Returns & Orders   🛒 Cart

☰ All   Today's Deals   Customer Service   Registry   Gift Cards   Sell
Sign in
New customer? Start here.
Cyber Monday deals

Tools & Home Improvement   Best Sellers   Deals & Savings   Gift Ideas   Power & Hand Tools   Lighting & Ceiling Fans   Kitchen & Bath Fixtures   Smart Home   Shop by Room   Launchpad   Amazon Business

Cielsa Dawn Heavy Duty Key Lock Combination Lockset, Satin Nickel, 2-3/8-2-3/4-Inch...   4.3 ★★★★ 593   Cyber Monday Deal   -27% $58.31 $79.86   Sponsored ⓘ

Office Products › Office & School Supplies › Forms, Recordkeeping & Money Handling › Money Handling Products › Security Lock Boxes

Lospu HY® Key Lock Box, 4 Digit Combination Key Storage Lockbox, Waterproof Wall Mount Key Safe Box for Indoor, Outdoor, Home, Hotels, Airbnb and Schools Grey
Brand: Lospu HY
4.6 ★★★★½ ▾   629 ratings
Amazon's Choice
200+ bought in past month

$9.99
FREE International Returns ▾
No Import Fees Deposit & $12.73 Shipping to Austria Details ▾

Brand	Lospu HY
Color	Silver
Recommended Uses For Product	Office, Garage, Key Storage Lockbox for Home, Apartment, Hotel, Rental House
Product Dimensions	4.7"D x 3.4"W x 1.6"H
Special Feature	Weather Resistant

Roll over image to zoom in

3 VIDEOS

🔲 Material Alloy Steel   📏 Style Contemporary
🔲 Number of Doors 1   🔺 Shape Rectangular

About this item
- STURDY AND DURABLE: Lospu HY outdoor key lock box is made of high strength alloy steel and stainless-steel material, well-made and sturdy enough to withstand hammering, resist crushing, sawing, and prying. And the ABS shell can effectively prevent rain, dust, snow, sun, and repeated use for a long time.
- SECURITY LOCK BOX FOR HOUSE KEY: The 4-digit code allows you to set your own

$9.99
FREE International Returns ▾
No Import Fees Deposit & $12.73 Shipping to Austria
Details ▾
Delivery **Tuesday, December 17**
Or fastest delivery **Thursday, December 5**. Order within **16 hrs 25 mins**
📍 Deliver to Austria
In Stock
Quantity: 1 ▾
Add to Cart
Buy Now
Ships from   Amazon
Sold by   nestling_store
Returns   Returnable until Jan 31, 2025
Payment   Secure transaction
☐ Add a gift receipt for easy returns
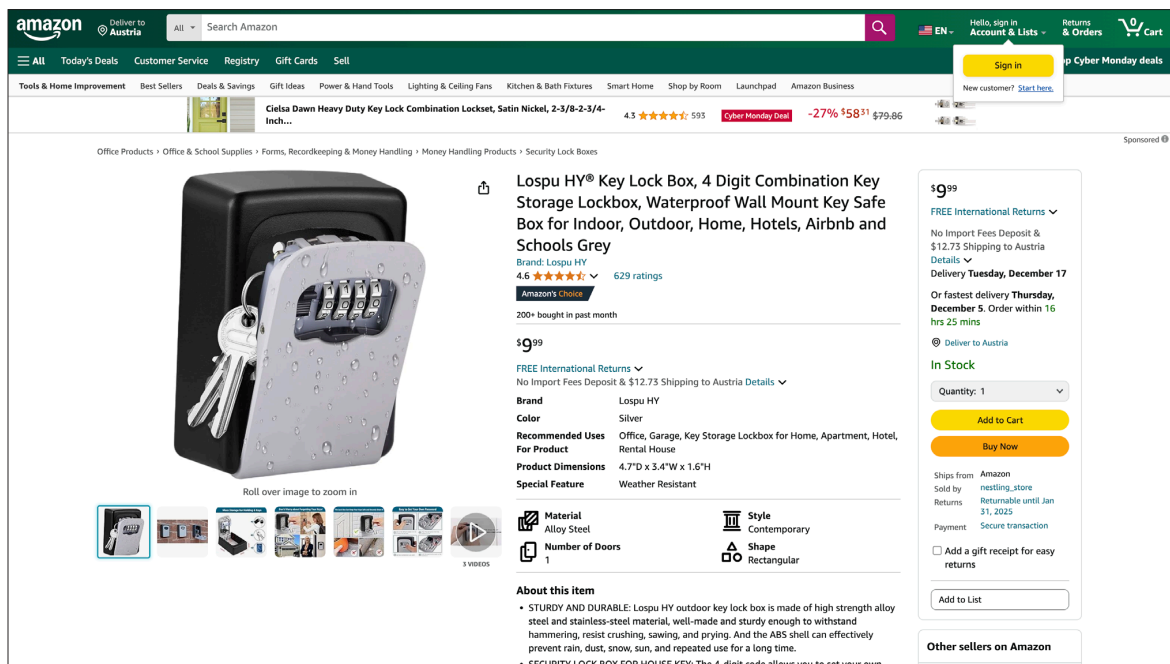Add to List

Other sellers on Amazon

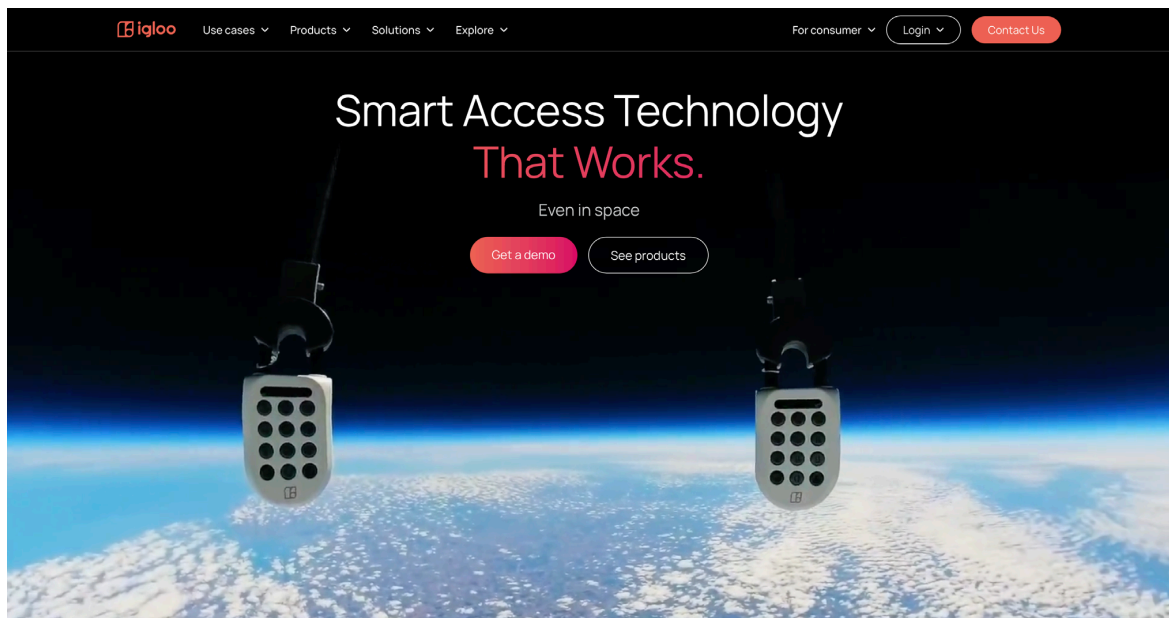fig. 4 key lock box for Airbnbs, screenshot amazon.com

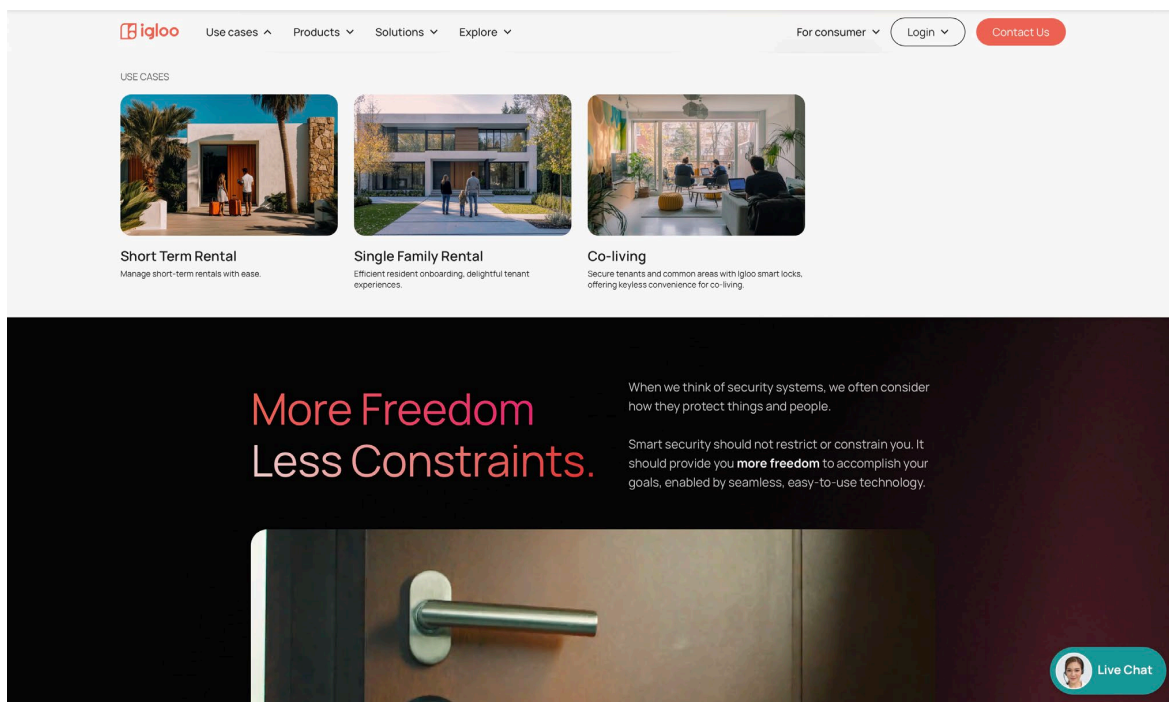fig. 5 key lock boxes in space, website igloohome

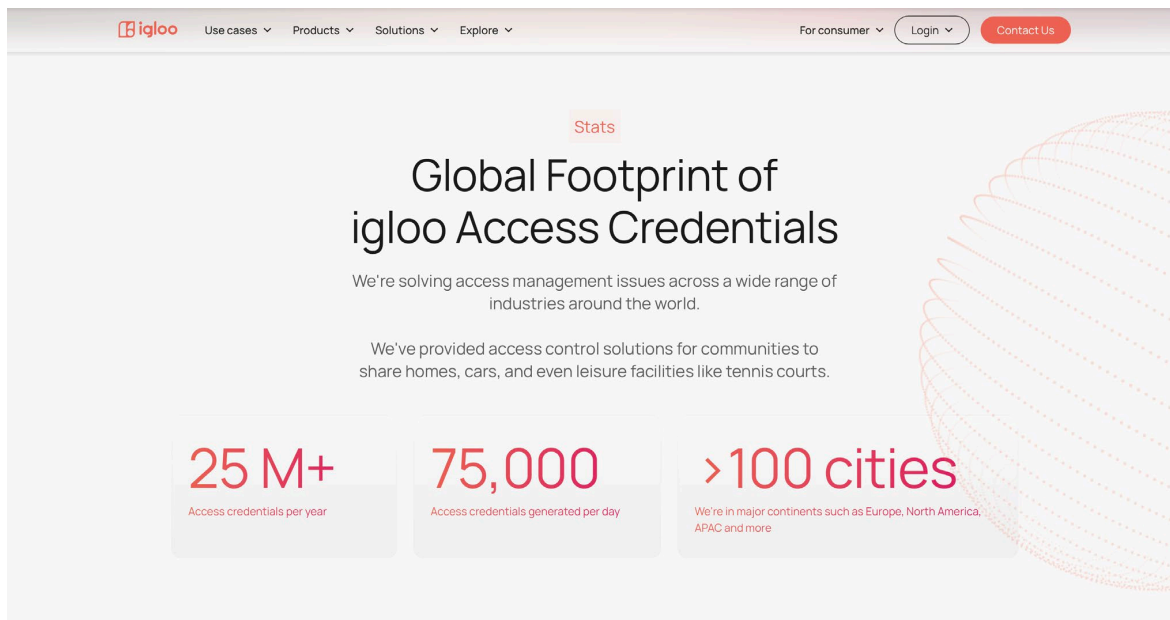fig. 6 marketing of key lock boxes for short-term rentals, website igloohome

fig. 7 claimed data collected through smart locks, website igloohome
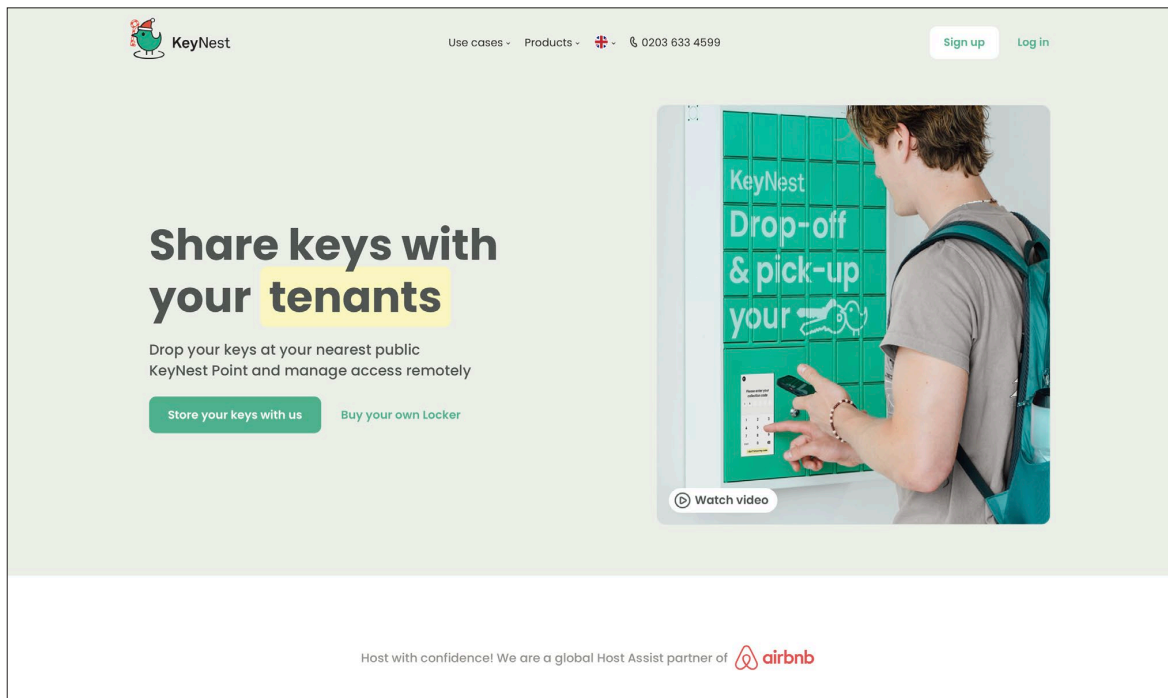

fig. 8 key management platform KeyNest, screenshot keynest.com

> ❝
>
> ## Lock boxes can impede access to services, cause damage to property, or obstruct genuine use of the structure.
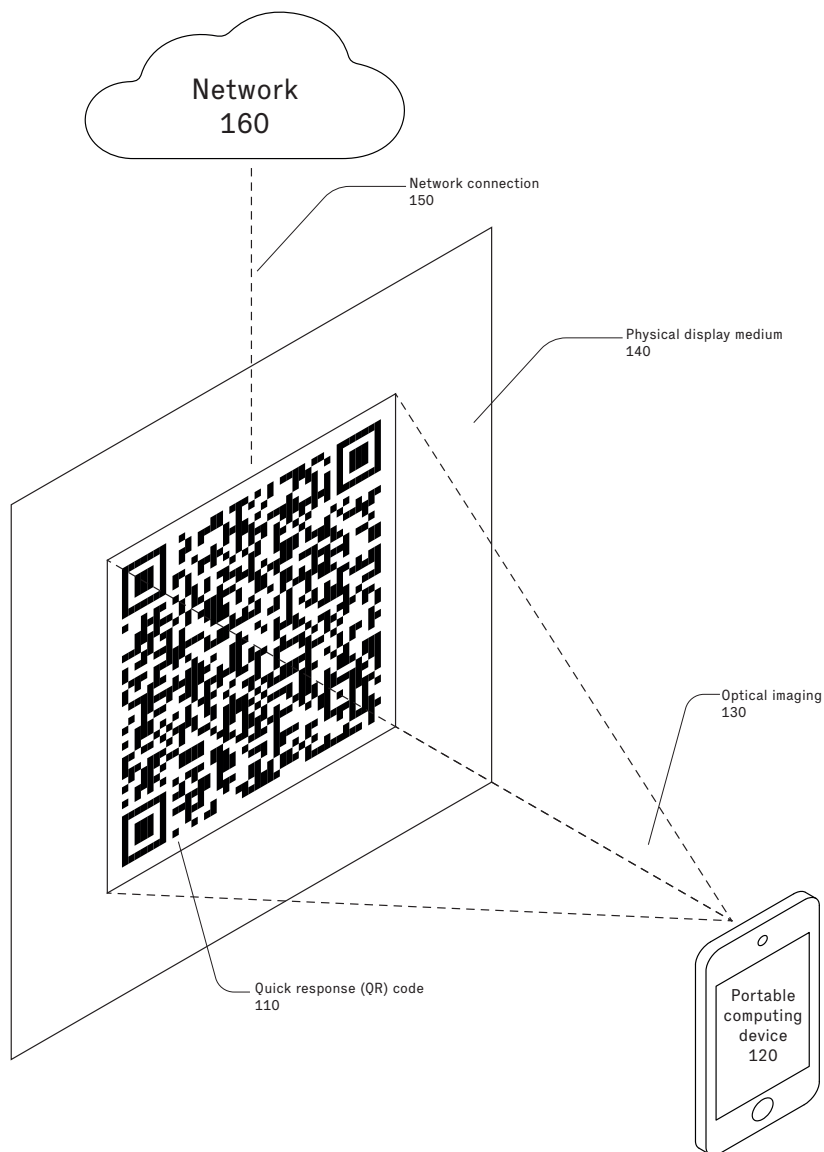>
> ### – City of Melbourne

fig. 9 screenshot Airbnb management platform "Roomerang"

fig. 10 tweet by Ian Brossat, member of the Senate representing the Communist Party in France

Machine-readable codes

The instinct to connect with the digital world directly and make this connection seamless through elements within the physical world seems to be a core principle of the platform city. Machine-readable codes in physical form, such as QR codes are useful elements to facilitate this.

Network
160

Network connection
150

Physical display medium
140

Optical imaging
130

Quick response (QR) code
110

Portable
computing
device
120

Machine-readable codes

At the core of any technology lies the challenge of its interface, between its user and the medium. Since ancient times people have used symbols and signs as a form of technology, to transport abstracted information between people, be it characters in a script or pictograms on a cave wall. This is, at its core a problem of encoding and decoding information, a play between the technology and its users.

For example, think of a carving into a branch in the shape of a wave. What meaning would you derive from it? The problem of how to interpret it meaningfully offers insight into the difficulty of encoding and decoding messages. Does the carving mean drinking water, does suggest „river", or might its meaning be the magical symbol for a rainier season, or maybe a plethora of other ones? This interpretive task, between the message encoder and its decoder, sits at the heart of any information technology. In some instances, the interpretive skill of the decoder does not need to be that advanced to reliably decode the message (a hand-drawn abstraction of an animal might transcend time and space and its meaning is easily decoded), in others much more. With deeper levels of abstraction, the task becomes more advanced and thus dependent on more complex and taught decoding skills.

Teaching such skills and formalizing them in a way that can create a stable form of information transfer requires the invention of consistent forms of encoding and decoding schemes. Not just forms of verbal communication but writing systems had to be created. With the advent of these, different regions isolated from each other came up with unique forms of scripts. The need for interpretation and mediation between different scripts became apparent and necessary to encourage the flow of information between communities. Fast forward to the early 19th century and the invention of the mechanical loom. Whereas before communication channels had been mostly concerned with communication between people, the advent of automation due to the Industrial Revolution required people to find ways to "communicate" with their machines. Regardless of what we might tell ourselves (Large Language Models, ChatGPT and all) humans and machines operate within fundamentally different communication schemes tailored to their specific set of skills and properties. This becomes apparent when you look at people and their profound visual interpretive skills regarding shape, colour and contrast which allows them to recognise a plethora of symbols and signs and to differentiate nuances between them. In contrast to this, machines operate reliably and on repetition by interpreting discrete states, detectable by the presence or absence of something. Nuance (which means a state between presence and absence) in the case of "machine readability" could be called noise, which is the introduction of uncertainty into a mechanical system and can lead to unforeseen outputs. Whereas machines have difficulty recognising nuance, they are quite good at consistently and reliably decoding and interpreting vast amounts of information, as long as one encodes the sets of information in strictly "stable" ways. In the case of mechanical looms, continuous strips of paper were used as a medium, where the information, a set of instructions for the machine to follow, was encoded with the presence of a hole or the absence of one. This led to using a fundamentally binary system, of ones and zeroes, represented by these punched holes. These so-called punch cards, with their lines of coded instructions punched through, are seen as the birthplace of the modern logic programming machine, what we learned to call the computer.

Ever since then the mediation between humans and machines has been at the centre of computing development alongside the translation flow between the digital (finite and binary) and the physical (nuanced and analogue).
In this, it has always been the holy grail of human commuting to make computers aware of physical spaces, and to bring digital spaces more frictionless into physical ones. Especially with the advancement of the Internet in the late 20th century and the mass proliferation of interconnected smartphones in the early 21st the need for "frictionless" movement between the digital and physical environment grew. This apparent desire for merging physical and digital spaces lead amongst others to the invention of the "machine-readable code" such as, most famously the QR-code (quick response code).

What is a machine-readable code (such as the QR code; in this text, we will use „QR code" interchangeable with „machine-readable code" even though there are many more types of these codes)? It is a two-dimensional graphic code, mostly black and white, readable and decodable by CV (computer vision) systems and used as a key for digital access to digital environments, but within physical space. Representing it in black and white is analogous to the punch card's representation of binary data. At its core it solves the problem, that even though we are constantly surrounded by digital spaces in the form of electromagnetic waves we can neither see them nor reliably and consciously connect with them within our physical space. Furthermore, they are a graphic signifier, an icon, often but not always in connection with other graphic elements that crucially signal both something to humans and machines, even if it does that for different reasons. This is interesting as machine-readable codes are meant to grab people's attention, ie. be spotted by humans but ultimately decoded by machines.

Before expanding on the functionality of machine-readable codes, the context in which they are being used has to be highlighted.

In the early 2000s, after the Dot-Com bubble and the downfall of "Web 2.0" a new form of digital economy started to develop. Fuelled by the 2008 financial crash and disillusioned by the collapse of seemingly stable investment assets such as housing, many investors started to look around to find new industries to profit from. At the same time platforms that promised to revolutionise work through gig-work models and the "idea of shared ownership" started to emerge. They profited from the mass layoffs that many labourers in the wake of the financial collapse experienced and from their desire to find financial stability and independence outside of traditional modes of work. These platforms sold the promise of self-determination through platform-based economies to millions. Suddenly communication technologies were not just a way to connect people but became people's way to structure, negotiate and build their economic life.

However, to follow Jathan Sadowski's argumentation in his text "Ten Theses on Digital Capitalism" it is no coincidence that the proliferation of platform-based work and ownership first established itself within working-class communities. Delivery app infrastructure, gig-work such as package transportation in service of platforms like Amazon and work within fulfilment centres emerged. In these ecosystems, machine-readable codes started to come to the forefront, as a way for the "new working class" to communicate with the machines they found themselves working alongside. Furthermore, and more importantly the codes became the primary way to interact and communicate directly with the larger platform infrastructure. Whereas the punch cards of the earliest computers were means of communication with machines akin to a flash drive, the machine-readable codes in

the context of the platform economy became tools for people and machines alike, for unidirectional communication and status updates of a given task to the larger system. To give the example of a worker within a fulfilment centre, working alongside robotic forklift retrieval systems and using the handheld scanner to track task progress. Machine-readable codes are used by machines and workers alike to scan in parcels which inform the centres' system and more importantly the platform infrastructure about the task's progress. The codes also give access to vital information for progressing forward in the "task-stack" and to achieve it optimally. This also meant that work could be decoupled from traditional Fordist concepts of the conveyor belt assembly and towards a more platform-based notion, in which each user (human or machine) could work as an independent node within a dynamic network of users. No longer does "the global ticking of the clock" give the workers' rhythm but the „task-stack", with its notifications, pop-ups and beep each time another code gets scanned. Individualized work, within individual task structures as part of a larger platform ecosystem.

With its proliferation within specialized industries also came its establishment in other fields. Throughout the 2010s machine readable codes became a staple in graphic design as a means to access online platforms with the help of just a small, graphic icon. However, what supercharged the use of codes such as QR codes was another global phenomenon that affected much more than just tech, the Coronavirus of 2019 (COVID-19). In its wake interactions within physical spaces came to a halt, platforms and online retailers boomed as people stayed home and had to conduct their business from home and physical contact between people was restricted. Machine-readable codes, formerly a niche technology suddenly found their way into everyday interactions, in restaurants, check-in forms, and most importantly tracking systems to trace and inhibit the flow of the virus.

Furthermore, they functioned as the inhibitor of physical encounters (as these came with the threat of contagion) and encouraged digital connections through phone-to-phone contact via computer vision and QR decoder technology paired with quick database queries. Perfect for the flow of not merely economy but the free and uninhibited flow of massive amounts of data. Necessary in uncertain and dangerous times but also a happy day for the platform city.

By now the use of machine-readable codes within our everyday cityscape has become as normal as many other icons and graphic elements. To give an example a growing number of cafes, bars and restaurants never switched back to physical menus after the social distancing was phased out. This also goes hand in hand with the establishment of dynamic pricing within restaurants and grocery stores. By using digital menus accessible through QR codes and online platforms, businesses can dynamically adjust their prices for their goods, following the standard logic of capitalism (supply and demand). In restaurants, this means at peak hours prices increase, whilst in supermarkets it means that food items that are almost at the end of their expiration date are getting priced lower. Even though contemporary experiments, such as „surge pricing" have faced severe backlash from the general public a trend is noticeable. No longer are systems bound to specific "price-promises", which lead inevitably to inefficiencies and loss of profits, but can benefit from the optimisation properties of dynamic pricing schemas. These can result in reduced waste and losses but also mask the true cost of items as it makes comparing prices harder for consumers.

Furthermore, in order to understand more specific dynamics inherent to contemporary machine-readable codes, we find in our every day, we need to grasp nuances within the technology itself. One must differentiate between static and dynamic codes, as subgroups of machine-readable codes. Interfacing with a static code one will always reach the information hardcoded into the code itself. This means it is not only restricted to a certain limited amount of information that can be stored directly within it (proportionally to the dimensions of the code, the number of pixels) but also that the information stored within it can not be changed after it is encoded. In contrast to this, dynamic codes exist. Dynamic codes do not encode the information itself but rather hardcode a pointer and/or a key that points to the location on the web, where the information is stored. The code itself only acts as an intermediary, guiding directly to the location of the information. This means that the size of the information is only dependent on the size of the storage location and not on the capacity of the code itself. It also means that the information can arbitrarily and dynamically be changed without the need for changing the hardcoded code. As discussed in "The New Spirit of Capitalism", in a system that relies on "change", the constant flow and the possibility of the dynamic shifting of information are a necessity. Otherwise, the machine-readable codes are just another graphic element, like the written link or an icon, concretely signifying abstracted information. By staying dynamic, codes and the information they point towards can stay abstract, unstable and flowing.

For the following, dynamic codes also have another crucial advantage. As they act as pointers to the specific location of information, they become merely part of an ecosystem. This means that all interactions with the code can be tracked and analysed on the backend. How often is the code scanned, how successful is it embedded into physical space and does the placement of the code result in interactions? These amongst others are data points that can be mined and analysed with the help of dynamic codes. Whereas previously it was hard to determine if graphic elements (such as adverts) are successfully placed in public space, dynamic codes can give insight into people's attention habits. To go one step further and by considering the example of the use of machine-readable codes in conjunction with dynamic pricing in supermarkets. If a market moves away from static price displays towards machine-readable codes, shoppers can only know the current price of an item by scanning the code associated with it, which forces them to disclose their attention to the larger system. By doing so, over time a data-based profile of people's shopping habits can be created, not just of the items they end up buying but also of the ones they are only interested in. This means that grocery stores can become data mining facilities merely by the technology they are using. A dynamic that mirrors the role of search engine companies within digital spaces, with their primary business being data gathering.

This development also has secondary effects. As people start to scan their items by themselves, not just for price inquiry but also for checkout the role of checkout workers becomes obsolete. This can be seen in the trial run of Amazon's physical grocery store location in 2018-24 called "Amazon Go", using "Dash-Carts" (59 – smart carts) and "just walk out" methods of payment. Even though the experiment was ultimately a flop, and not the "revolution to grocery stores" professed, it still points to a future without supermarket clerks and one where labour previously compensated (paid personnel at the checkout counter) is offloaded to the consumer. This also illustrates a trend highlighted by Jathan Sadowski, where smart tech first gets tested on low-income labourers, such as scanning machine-readable codes within fulfilment centres and then gets rolled out to the general public. A trend, ultimately often detrimental to the same labourers that were used to build the digital infrastructure in the first place.

Lastly, and crucially dynamic codes have one big advantage over static ones. As they point towards a location and do not encode the information itself, they do not house the information decentralised (within the code as a graphic element itself) but rather locate it in a central location accessible through the network using the code as a pointer. In the Platform City one does not own information but rather is granted access to it. Thus, one does not encode information statically but rather keeps it in a controlled environment and grants access to it. This can be seen by the QR code's development from an obscure street art element in the 2010s, where protest slogans or witty texts were encoded into the code and therefore into the streets itself, to mundane marketing elements on every graphic display, nowadays. The previously obscure-looking code has become so ubiquitous that it lost its attention-catching appeal. This has led to a new trend, the augmentation of machine-readable codes as "QR code art" with the help of machine learning and image generation technology. This means moving away from the black and white grid associated with these codes, towards graphic images that encode the patterns and structure of the codes directly into them, still allowing them to be read by machines. They are the ultimate merger of human readability through aesthetic means and machine decoding and represent the logical step towards the seamless integration of the platform city into everyday physical spaces. Whilst the attention-grabbing aspect of the code is highlighted, the deeper integration of machine-readable codes into everyday spaces is being vailed by the aesthetic transformation, using creative means. This is achieved by the use of similar mechanisms as corporations use to mask their activities, utilizing the „creative aesthetic". To take the example Martha Rosler uses in "The Artistic Mode of Revolution: From Gentrification to Occupation", the aesthetics of revolutionary expression, such as second-hand furniture, artisanal coffee culture and graffiti-covered walls are appropriated by corporations to mask their economic interests in the veneer of social consciousness, without implementing the underlying mechanisms of political change. Similarly, transforming machine-readable codes into street art to be scanned, whilst still using them as data-mining nodes in public spaces uses artistic expression to mask their true purpose.

The instinct to connect with the digital world directly and make this connection seamless through elements within the physical world seems to be a core principle of the platform city. This tendency, of humans to augment their environment and use information technology to communicate with each other can be traced back to the core of the establishment of information systems. This also established a fundamental tenet of computation, the importance of communication with digital ecosystems. The machine-readable code within physical spaces is the contemporary solution to this problem. It exists in an ecosystem that values seamless interactions between digital and physical spaces and relies on the frictionless economy of information. It not only facilitates the flow of it but also enables the augmentation of existing spaces and systems to gather data by themselves. Machine-readable codes act as gateways, whilst allowing the underlying information to stay dynamic. Throughout the 2010s and 20s, machine-readable codes found their way, from industrial applications into everyday use. By now they are used as representation for the most personal of information, such as IDs, financial statements and medical records. To abstract the sentence from "The Paradox of Political Art": If there is such a thing as „the aesthetics of the platform city", one of them might be the labyrinth-like, black-and-white patterns of QR codes plastered around city spaces. It signifies the seamless incursion and entanglement of the digital world with physical space on an iconographic level and signals for more to come.

Citations:

Boltanski, Luc and Ève Chiapello (2005, 2018) The New Spirit of Capitalism. London: Verso, 103-163.

Rancière, Jacques (2010) 'The Paradoxes of Political Art', in ibid., Dissensus: On Politics and Aesthetics, London: Continuum, 134-151.

Rosler, Martha (2013) Culture Class. Berlin: Sternberg Press, 191-224.

Sadowski, Jathan (2020) Too Smart: How digital capitalism is extracting data, controlling our lives and taking over the world. Cambridge, MA: MIT Press, 49-72.

McFarland, Matt (2018) I spent 53 minutes in Amazon Go and saw the future of retail. CNN Business: https://edition.cnn.com/2018/10/03/tech/amazon-go/index.html (last read 03.01.2025)

Ramishah Maruf (2024) Amazon's cashier-less technology was supposed to revolutionize grocery shopping. It's been a flop. CNN: https://edition.cnn.com/2024/04/03/business/amazons-self-checkout-technology-grocery-flop/index.html (last read 03.01.2025)

Huberman Jenny (2021) Amazon Go, surveillance capitalism, and the ideology of convenience. Economic Anthropology, Wiley Blackwell, vol. 8(2), pages 337-349, June.

Microsoft Technology Licensing LLC (2010) United States Patent Aplication US20110290882A1: Qr code detection. Redmond (WA) https://patents.google.com/patent/US20110290882A1/en (last read 03.01.2025)

Science + Industry Museum (2019) Programming patterns: the story of the Jacquard loom https://www.scienceandindustrymuseum.org.uk/objects-and-stories/jacquard-loom (last read 03.01.2025)

Cerullo Megan (2024) Dynamic pricing was once the realm of Uber and airlines. Now, it's coming to restaurants. CBS News: https://www.cbsnews.com/news/dynamic-pricing-uber-restaurants/ (last read 03.01.2025)

Bennett Elizabeth (2023) Surge pricing is coming to retailers, restaurants and even fast-food chains like Wendy's: https://www.bbc.com/worklife/article/20231101-why-surge-pricing-is-coming-at-restaurants-online-retailers-and-more (last read 03.01.2025)

Djaidani Alladdine (2024) QR Codes on Street Signs: A Unique Solution For Smart Cities. Uniqde: https://www.uniqode.com/blog/marketing-and-engagement/street-signs (last read 03.01.2025)

Nm. (2024) Create QR Codes with Stable Diffusion (QR Code Monster). https://www.nextdiffusion.ai/tutorials/mastering-stunning-qr-codes-with-stable-diffusion-qrcode-monster (last read 03.01.2025)

https://art-qrcode.com/ (last read 03.01.2025)

Machine-readable codes

static code   dynamic code
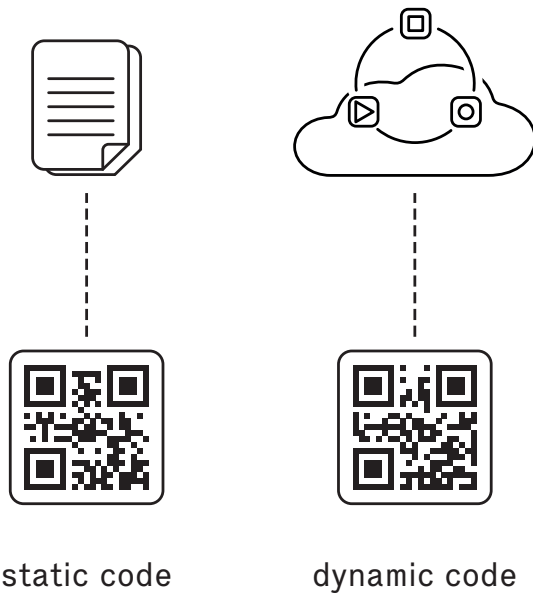
fig. 2 Implementation types, diagram: Maximilian Liko, 2024

encoded text
1 character

„L"

encoded text
64 characters

„Lit odiatios exerume
turibusanim exeritint
que cone voluptaqui
d"

encoded text
512 characters

„Fictia con porunt voluptatate sundi odi-
tatiis il idis eumquodi quo blaboriatur?
Ferrorrume verchillent optae vel maximai
oritem sintemo lorehen destia si is dolup-
ta sinveniet acearum ratus perios audis
essuntur minis aut poresci eniaest atur?
Alitibus as sequis voluptas volenimet
aperi oditatiam ipsandae verfero et inve-
nihit landi iscit quaspero voluptatio om-
nissequias eos exceptatia consequi vel
moloruntur, ab ipienditat eum faccus aut
et peliatem que nihilia ectibusam et vo-
lest, od quam qui re vendebis etab"

fig. 3 Encoding size of static codes, graphic: Maximilian Liko, 2024
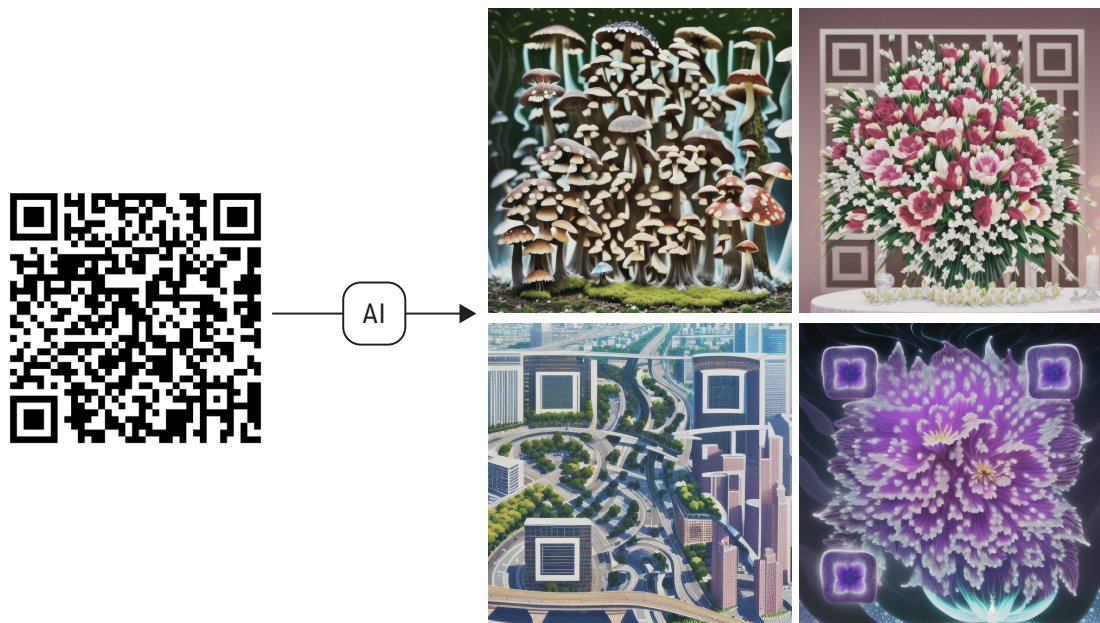
fig. 4 QR Code Art with Stable Diffusion, graphic: Maximilian Liko, 2024

fig. 5 QR-Code on Poster, photo: Maximilian Liko, 2024

fig. 6 „2. Korinther 4.18" – QR code art, photo: Maximilian Liko, 2024

fig. 7 Fritz-Code – QR code art, photo: Maximilian Liko, 2024

fig. 8 Restaurant digital menu, photo: Maximilian Liko, 2024

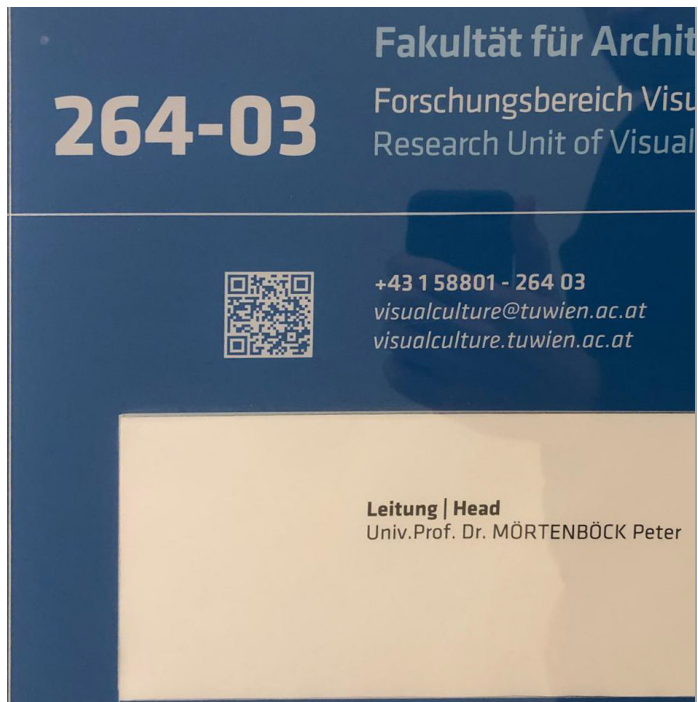fig. 9 Store data-privacy access, photo: Maximilian Liko, 2024

fig. 10 Fakultät TU Wien web-presence, photo: Maximilian Liko, 2024

fig. 11 Art exhibition in public space, photo: Maximilian Liko, 2024

fig. 12 Metro advert, photo: Andreea Avram, 2024

fig. 13 Train registration, photo: Maximilian Liko, 2024

JOHANNA MAGGAUER
MAXIMILIAN LIKO
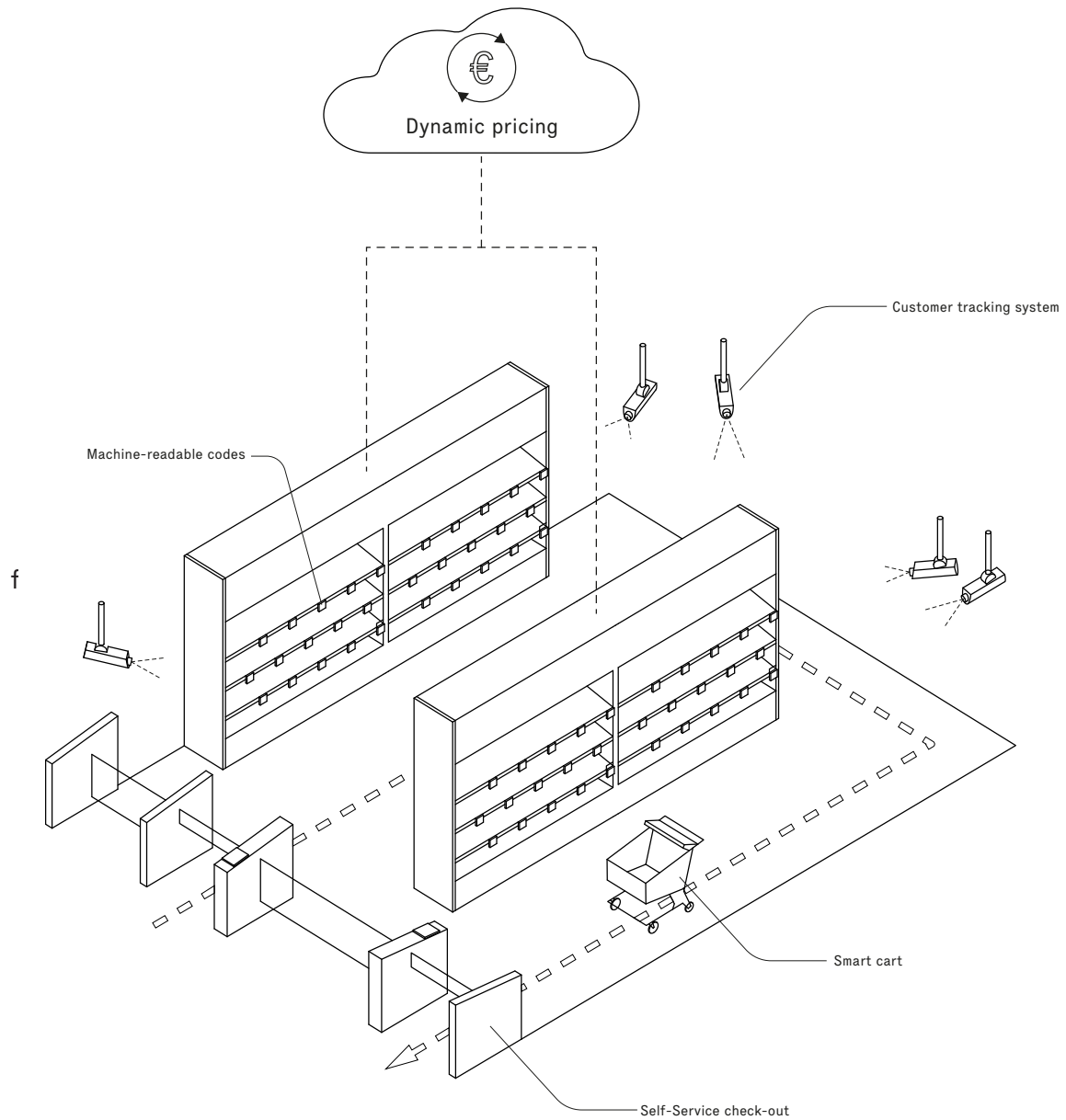
Just Walk-Out Store

Dynamic pricing

Customer tracking system

Machine-readable codes

f

Smart cart

Self-Service check-out

JOHANNA MAGGAUER

Self Service Ordering Kiosk

With their sleek customable design self service ordering kiosks have become natural part of platform cities.
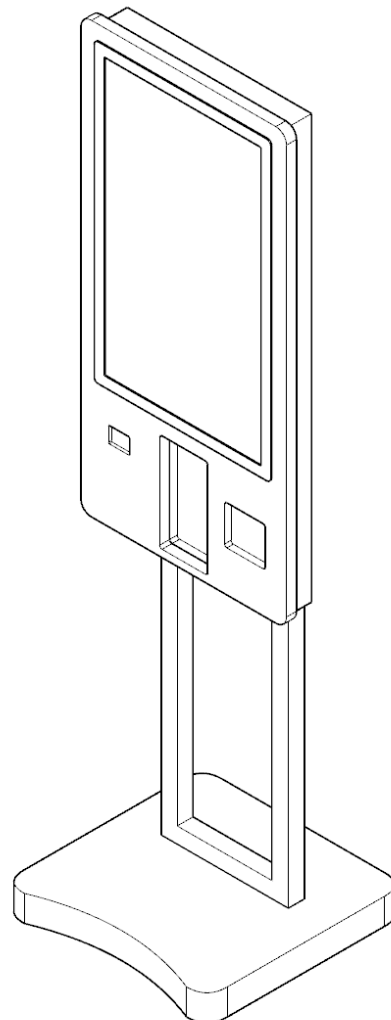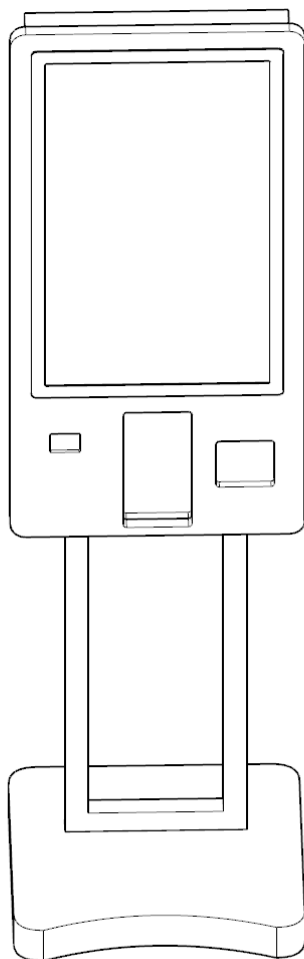
Self Service Ordering Kiosk

Life in the platform urbanism is characterized by the transformation of real spaces in cities. Platforms are interconnected systems that have started to dominate a wide variety of domains. Technology has become an integral part of human life and has contributed to the acceleration of day to day life. With this efficiency and convenience have acquired a new status of importance. For this reason it is no surprise that self-service ordering kiosks have found their way into almost every service sector in our contemporary cities. These interactive kiosks are devices that are placed in a static location. Through the medium of a screen people may interact with it in order to acquire information, goods or services. The kiosk's appearance and its offers may vary greatly depending on the space it is set in and what task it is appointed with.

The story of the interactive kiosk begins earlier than we may have anticipated. It can be traced back to the invention of the vending machine by Hero Alexandria in the first century in ancient Greece. This engineer and mathematician created a pot-like machine that would dispense holy water through the insertion of a coin. The mechanism functioned through the weight of the coin triggering a lever that would activate a valve that would allow the flow of water. The machine would create a system of balance and control in temples. It ensured that no person could take more of the holy water than what they paid for.

It was not until the 1880s when an English book seller named Richard Charlile transformed Hero Alexandria's idea to create the first newspaper dispensing machine. In the following years vending machines boomed. Some dispensed stamps and postcards while others offered chocolate or chewing gum. These were the first forms of shops that allowed customers to serve themselves with the help of a machine.
In conventional shops it took far longer for self serving concepts to arrive. Until the 1950s a shop was always featuring a counter that divided the customer from the staff and the product. Much like in a traditional pharmacy the employee would bring the product to the customer. Starting in the UK the concept of aisles was introduced. This gave shoppers the freedom of walking and looking, feeling and smelling the product. This completely changed the shopping experience. The customer could act with self determination and at the same time shops developed whole psychological strategies to nudge the buyer into feeling more inclined to spend his cash.

After the introduction of ATMs in the 1960s the progression moved towards the first self-service interactive kiosk in 1977. The University of Illinois introduced the „Plato Hotline" which allowed people to search for movies, maps, bus timings, activities and the curriculum. It was essentially a big computer with a screen and a keyboard.
It immediately became a hit with more than 30.000 people using it in the first six weeks. In 1985 the first network of interactive kiosks was introduced by the Florsheim Shoe Company. The system allowed customers to search for shoes and see if they were in stock in certain stores. It was also possible to pay for a pair of shoes through the machine and get them shipped to your home

Modern self service ordering kiosks are used to improve certain aspects in stores. Big chain stores like Ikea have been the firsts to integrate self service paying devices into their store concepts. For them interactive kiosks first and foremost offer a more precise and efficient way of tending to customers. Every customer may scan their own items, less employees are needed while more payments can be made at the same time. All that is needed is one worker to keep an eye on the shoppers and the machines, in case anything goes wrong. There are even some shops that are completely staff-less and are only operated by machines. These „just walk out" stores integrate scanning machines and a self check out kiosks. Their technology was debute by Amazon with the promise of revolutionizing the shopping experience. Until now the concept has not really taken off with some people stating it failed.

The kiosks used for payment in stores are placed at exit points just as ordinary cash registers would be. They have medium sized screens that are used for navigation and payment. Pop-ups on the monitors with QR codes are used instead of membership cards. The device has a scanner that the shopper uses to register all his chosen goods. Some machines also include a scale for weighing certain items. This serves as a sort of control mechanism to make sure that nothing gets stolen. At the end of the process the buyer is expected to pay. Most of the time it is only possible to do so by card although some models can take cash.

In chain restaurants like McDonalds and Dunkin Donuts it is also very common to see and use such devices. In contrast to most shops the kiosks have a more fancy designed hard and soft -ware. The screen is big and bright and often has a long rectangular portrait format. These interfaces are not only used for scanning and paying but act as a virtual shopping aisle. Each item is named and depicted. There is a meticulous order and categorization system in place. In many cases the screens double as advertising panels when they are not in use. They show tempting images of juicy burgers and crispy fries while catchy slogans are drifting across the monitor. When a shopper has approached the kiosk and lightly touched it with a finger the ordering process has commenced. Everything is supposed to be very clear and easy to navigate. After choosing the language and whether the order is to go or for here the next question is if the person is already collecting points, if they are they may get additional perks that could save a lot of money. Finally the ordering menu may be accessed. The products are staged in a most appealing manner and there are many categories to choose from. In many cases extra customization is available: If you have an aversion to onion for example it is as easy as tapping a button to make you satisfied. The possibility of a mistake is practically nullified as the employee tasked with assembling the order gets everything loud and clear in black and white on paper. The last step is payment. Before you can actually pay the machine makes sure you have not forgotten anything by asking if you would like extra sauce or maybe a drink or dessert? After the whole process you are rewarded with your receipt and your number. Now all you have to do is wait for some moments for the number to appear on another screen and then you can enjoy your meal.

Much like in the food industry the system of self service screens also makes an appearance as a ticketing machine. If you go to the museum chances are that you can avoid a long line by simply using one of the machines. They are sleek and inviting. Instead of advertisements the home screen is proudly displaying the museum's logo and name. To

be accessible to tourists there is a great selection of languages to choose from. When you have found yours you may look at the different offers. Everything you could want to know is provided. After choosing the suitable tickets for you and your company you might have to enter some information like which country you are visiting from.
After easy card payment the museum experience may begin.

Another area where ticketing machines are used is transportation systems. Trains and metro stations have long made use of them. The advantage is they can be placed anywhere and are operational during all hours of the day. These devices also have screens but are often much less fancy as their counterparts standing in museum entrance halls. In many cases they are bulky and fixed into a wall. They also show the available tariffs and in some cases provide information about the transportation system. They offer cash and card payment. In terms of efficiency they may seem a little outdated. Afterall an app on your phone could do everything the machine can but from the comfort of your own home. Airports are another location where self service ordering kiosks may be encountered. They somehow feel very natural there. With their sterile atmospheres the faceless monitors seem to fit right in. Furthermore repetitive tasks like checking in, weighing luggage and printing tickets are just what the kiosks do best.
When you have arrived at your destination you may want to check in to your hotel. Thanks to the self service ordering kiosk it doesn't matter when you've landed. Check in is possible at any time as the machine does not get tired.

A new sector that the self service kiosk has found work in is healthcare. Relieving overworked nurses and doctors it has added a real benefit to the hospitals and doctors offices. Information that would have to be written on paper by hand and then retyped into a system can now be entered by the patient herself on a tablet or similar screen. Like in fast food restaurants, extra services that may be booked can be chosen. On top of that the patient could book their next appointment themselves without the stress of making the staff wait while checking the calendar.
Finally self service kiosks are also readily used in libraries to register borrowed books. With the help of a library card account can be accessed. By placing the desired book on a surface it will be added to the account. To give back the book the same steps need to be followed. This system works well in the library setting that needs to be tediously organized to function.

The boom of self service ordering kiosks have created a new market for hard- and software needed to produce them. The sellers have websites where they advertise the product to small and big buyers. The slogan is that one system will be able to provide all the solutions for anyone who wants it. It really only starts with the design of the hardware: from basic to special there are seemingly endless possibilities to make the device's exterior reflect the design identity of a business. Not only the outside but also the inside is highly customizable. The software design can be linked to the design of the website which will provide easy management and a professional feel.
But the advantages of the system do not stop at design, even more important for the buyer is that the self service ordering kiosk will be able to generate about a third more income. Through efficiency a lot more customers can be served. As the screens are also able to function as advertisement they may induce the buyer to spend more than he was initially inclined to. Moreover, costly staff may be reduced. This will not only minimize wage costs but also reduce time and resources spent on training them. With the right software the kiosk only needs to learn once. What is more is the kiosk's natural

inclination to collect the information it is fed. As it receives a mass of data each day the habits of users can be analyzed thoroughly and as a result a better selection of goods can be curated. With all its characteristics the self-service ordering kiosk is a result of our social, economic and political reality which has evolved to be what it is today. As Eve Chiapello and Luc Boltanski might say it is a manifestation of a new spirit of capitalism. Capitalism for Chiapello and Boltanski is not static but fluid and adaptable. This ability to change is the reason for it's longevity and dominance. For if capitalism would not have evolved together with the world around it another system would have taken over. But it is not only capitalism that transforms when it needs to, humans and their environment change and adapt with it, it is a push and pull effect. With the kiosk we see that it has evolved over time as a result of the acceleration of the speed of life but through it's establishment our expectations and habits have too.

Felix Guattari, a French psychoanalyst who lived in the 20th century, coined the term ecosophy. As he writes in „The Three Ecologies" ecosophy is an ethical and political connection of three ecologies. These are environmental, the social and the mental and they shape our modes of existence. In this context the kiosk can be analyzed as a technological artifact that changes our thoughts, interactions and surroundings. From an environmental perspective, the kiosk's sleek design and clean technological appearance evoke a sense of forwardness. It appears to be unproblematic, but its existence depends on complex global supply chains, the extraction of raw materials, and the energy-intensive processes of manufacturing and disposal. Behind the surface lies the mechanism of exploitation and ecological degradation. The environmental ecology of the kiosk is one of invisibility. Socially the kiosk reconfigures interactions. Formally the counter situation in stores or even at cash registers provided us with brief human inter-action or sometimes even deeper connections. These are now replaced by algorithmic interfaces through which the richness of social interactions is reduced to a series of predictable gestures. The social ecology of the kiosk is one of standardization, where the wide range of human expression is lost at the price of efficiency. This new conformity evokes a strange sense of dystopia. In his text „Capitalist Realism" Mark Fisher, an English cultural theorist, investigates the effects of capitalism on politics, economics and public thought. He draws parallels to dystopian narratives, such as those in the movie „Children of Men" where public space deteriorates and the only remaining infrastructure serves commerce and control. The kiosk mirrors this bleak vision. It occupies the urban landscape as a fixture of a privatized public sphere, where interac-tions are mediated by machines rather than people. Fischer describes a certain cultural sterility, where everything new is actually a newly packaged version of the old. This sterility is reflected in the kiosk's homogenizing presence. Whether at an airport, a museum, or a fast-food chain, the kiosk offers the same experience, the same scripted interactions.

With the mental ecology the kiosk could represent a sort of machinic subjectivity in which users are invited to conform to its rhythms and logics. The kiosk sets a clear framework that might differ from variation to variation but stays the same at its core allowing the actors to move freely within its boundaries. The implications strongly connect to Michel Foulcault, a french economist and philosopher who was active un-til the 1980s. His works investigate how power dynamics function in the context of our western world. In „homo oeconomicus" the question of the human as a rational agent in a neo liberal context is dissected. The term „homo oeconomicus" was not invented by Foucault himself. The latin term for economic man was first used in 1906 by the swiss

economist Vilfredo Pareto in his „Manuale d'economia politica".

The economic human for Foulcault is supposed to measure his every action against the scales of efficiency and utility. Nevertheless he is more than just a rational actor in the economic sense. His economic rationality invades all areas of his life. Through that he is able to have complete freedom of choice at least in a certain sense. All choices must happen in a predefined context which makes them predictable and even controllable. The Homo Oeconomicus shifts the focus from a collective force to the one of an individual. A person that only acts in his interest and is concerned with his own gain. Even trivial acts might be weighed against each other, so a system of constant exchange between „egoistic" actors emerges. Small changes that lead to one choice being more profitable than another are enough to change everything. A governing agent provides these small nudges that lead to a preferable outcome. The "homo oeconomicus" accepts the reality of this system, adapting to its constraints while believing in its autonomy. This interplay between freedom and control is the hallmark of neoliberal governance, where power is exerted not by limiting actions but by defining the field within which actions occur.

The kiosk subtly nudges users along predefined paths. It represents a form of governance that does not operate through overt coercion but through structuring choices. It becomes a tool of governance, steering choices and behaviors in ways that align with the imperatives of profit and data collection. Following that line of thought the mental ecology becomes one of enclosure.

Through this lense the self-service ordering kiosk becomes a pattern that inhabits spaces in contemporary cities. On one hand it offers desperately needed solutions concerning the demand of smoothness and efficiency. On the other it is a tool that shapes new forms of governance and exerts a power dynamic connected to the collection of data. Therefore it does not simply remain a useful service tool but transforms into an agent that is serving the platform city.

As a tool of the platform city the kiosk is nearly seamlessly integrating into urban spaces. Their appearance is malleable and will fit any given urban environment. Like other manifestations of platform urbanism, kiosks capitalize on pre-existing infrastructures rather than creating new urban environments. Their reliance on established urban spaces underscores their dependency on the spatial and material conditions shaped by traditional urbanism.

The deep impact on political, social and environmental factors brought about by platform urbanism can at this point only be speculated about. The self-service ordering kiosk as a symptom of these changes is just one example. What is clear is that if we want to participate and make a contribution to society, escape is not an option. We have to find ways to reorient our values and interactions with platform technology. Awareness about bigger connections acting in the background of everyday actions may help us become more critical.

Sources:
https://www.logicvending.co.uk/history-vending-machines
https://technikmfg.com/a-brief-history-of-the-kiosk/#:~:text=Self%2Dservice%20was%20introduced%20in,kiosk%20and%20take%20the%20product.
https://spacepole.com/knowledge-hub/blog/the-rise-and-rise-of-self-service-kiosks
https://www.meridiankiosks.com/evolution-of-the-self-service-kiosks/
Guattari, Félix (2007 [1989]) The Three Ecologies. London: Continuum.
Boltanski, Luc and Ève Chiapello (2005, 2018) The New Spirit of Capitalism. London: Verso, 103-163.
Foucault, Michel (2008) '28 March 1979 – The Model of Homo oeconomicus', in ibid., The Birth of Biopolitics. Lectures at the College de France 1978-1979, Basingstoke: Palgrave Macmillan, 267-289.
https://visualculture.tuwien.ac.at/en/blog/publications/platform-urbanism-2/
https://en.wikipedia.org/wiki/Mark_Fisher
Mark Fisher (2009) Capitalist Realism. London: Zero Books

JOHANNA MAGGAUER

Self Service Ordering Kiosk

fig. 1 ATM, photo: Johanna Maggauer, 2025

fig. 2 libary kiosk, photo: Johanna Maggauer, 2025

fig. 3+4 McDonalds kiosk, photo: Johanna Maggauer, 2025
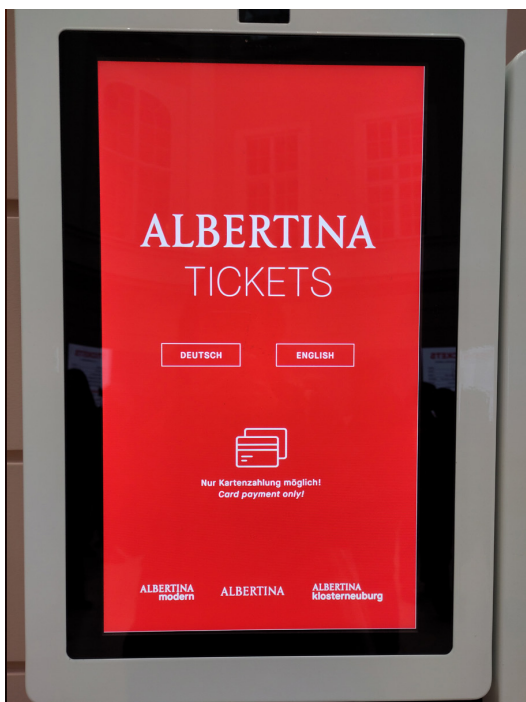

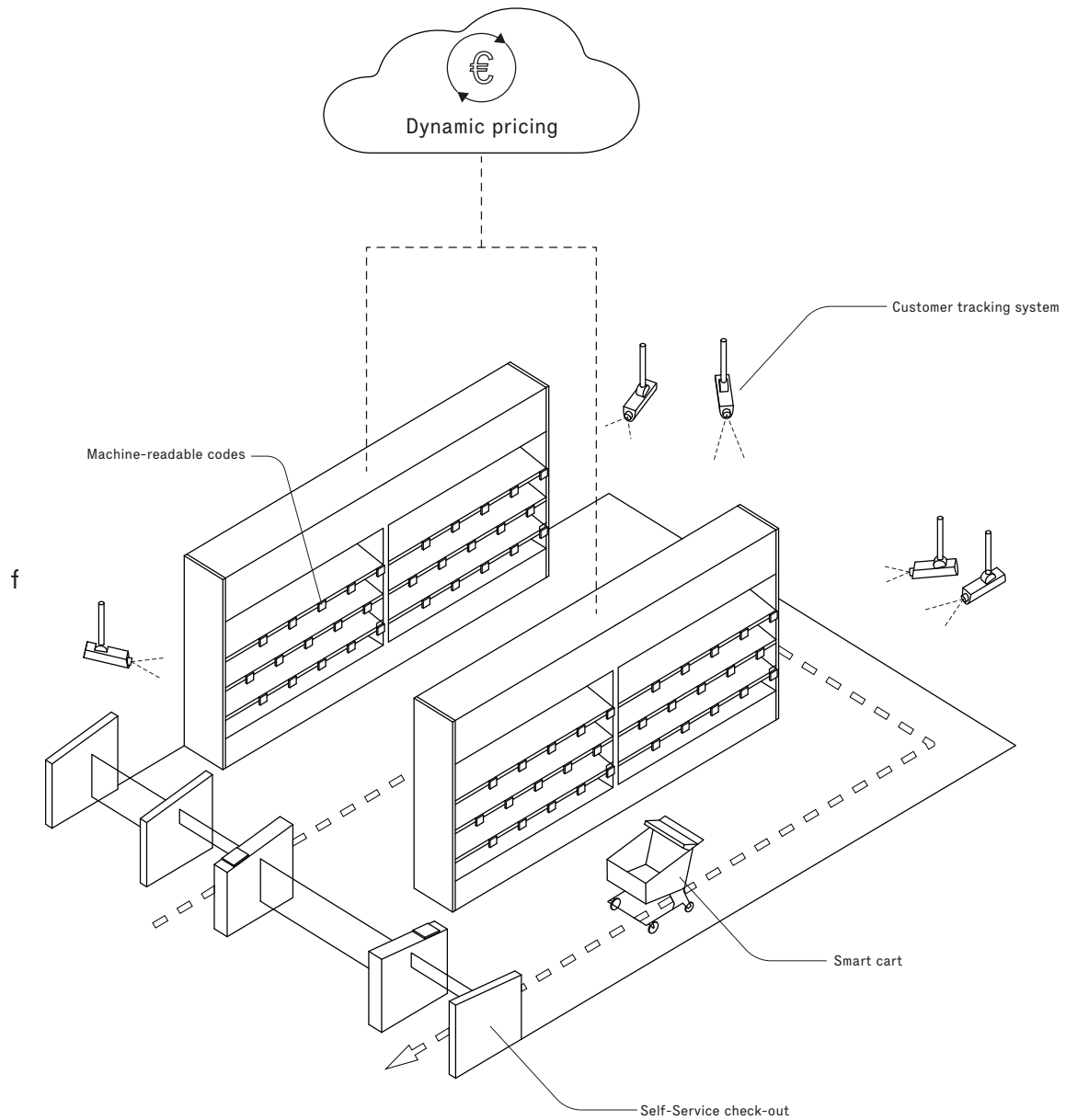

fig. 5+6 McDonalds kiosk, photo: Johanna Maggauer, 2025

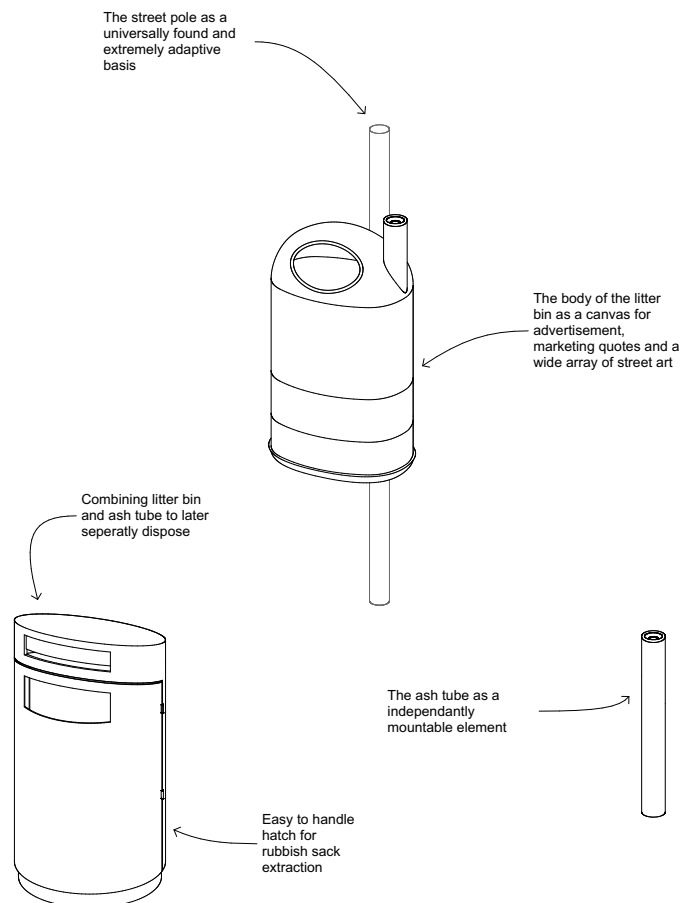fig. 7 shopping kiosk, photo: Johanna Maggauer, 2025

fig. 8 ticket machine, photo: Johanna Maggauer, 2025

Just Walk-Out Store

JOHANNA MAGGAUER
MAXIMILIAN LIKO

Dynamic pricing

Customer tracking system

Machine-readable codes

f

Smart cart

Self-Service check-out

The public litter bin

The public litter bin is part of the municipal service. It is accessible to everyone, at any time of the day and in any part of the city. Waste as a global variable, fuelled by consumer behaviour, a feature of a functioning administration and consequently, the public litter bin has become a popular canvas for street art, due to its status as a universal symbol.

The street pole as a universally found and extremely adaptive basis

The body of the litter bin as a canvas for advertisement, marketing quotes and a wide array of street art

Combining litter bin and ash tube to later seperatly dispose

The ash tube as a independantly mountable element

Easy to handle hatch for rubbish sack extraction

The public litter bin

It persists in the face of mistreatment, performing its function without complaint. It is ubiquitous, present in all urban and rural settings, including highways, tourist destinations, corporate headquarters, and the peripheries of remote rural areas. The unspoken guardian of cleanliness and servant to rubbish, a canvas for expression and sometimes the torch for riots. The object in question is both a source of convenience when required and a potential canvas for expression of opinion. The public litter bin represents a component of municipal service, frequently owned and managed at the state level. Nevertheless, it constitutes an element of the urban fabric that is continuously utilized and, to some extent, managed by all those who interact with it. An element that is subject to defined utilisation parameters, which are known to all, whether consciously or unconsciously, and which are sometimes adhered to and sometimes disregarded.

Looking at Austria and Vienna in particular, the public litter bins are managed and upheld by the Ministry for the Environment and Climate Protection, specifically the branch responsible for waste management, street cleaning and vehicle fleet. It is evident that the representation of the public litter bin represents a convergence of multiple layers of the urban environment. From an environmental perspective, the litter bin facilitates the collection and centralisation of waste, which would otherwise be dispersed and contribute to environmental degradation. This, in turn, has an impact on natural habitats and, subsequently, the climate. This illustrates the significant role that litter bins play in maintaining the integrity of the urban ecosystem.
Secondly, the term „waste management" suggests that the mechanism in question encompasses more than simply a litter bin for the collection of waste. A further processing apparatus is in operation to deal with the collected waste, as indicated by the latter part of the ministry branch naming, the „vehicle fleet." This apparatus is a separate mechanism whose sole purpose is to gather waste from litter bins, whether public or for household waste, and transport it to designated waste processing sites. Finally, the term „street cleaning" is worthy of mention. This concept encompasses the responsibility of maintaining clean streets, which is facilitated by dedicated operations and actors engaged in street and walkway cleaning. These elements are crucial for ensuring the physical accessibility and connectivity of a platform city, as they contribute to the overall infrastructure. From the naming of the responsible ministries and management branches, it can be inferred that the public litter bin is tasked with maintenance and prevention mechanisms, which entail a lengthy list of services and actors involved.
In Vienna, there are approximately 21,000 litter bins with integrated ashtrays and 1,200 freestanding ashtrays in public places for the proper disposal of cigarette butts. Approximately 130 million cigarette butts are collected annually, which would otherwise constitute a substantial environmental issue. The filters are composed of cellulose ester fibres, a plastic that has been demonstrated to degrade at a rate of up to 15 years, along with a number of toxic substances. During this process, microplastics are created and released into the environment. The indiscriminate disposal of cigarette butts also has a detrimental impact on the environment. These items contain approximately 4,000 chemicals, including arsenic, lead and cadmium, which can percolate into soil and groundwater. Fauna such as fish, birds and dogs frequently mistake the filters for nou-

rishment, leading to poisoning. Young children are also at risk of ingesting them while playing. Furthermore, cigarette butts act as magnets for other litter, are challenging to remove from green spaces and heighten the probability of fire.

The implementation of the public litter bin necessitates the provision of a surveillance and maintenance service, which in Vienna is provided by the WasteWatchers initiative. The role of the WasteWatchers is to monitor compliance with the cleanliness rules and to take action in the event of offences. Since 2008, the WasteWatchers have carried out approximately 100,000 official actions, which has resulted in a quantifiable reduction in littering. On a daily basis, over 100,000 full dog waste bags are disposed of, 128 million cigarette butts are collected annually, and there has been a 50% reduction in illegally dumped bulky waste and a 60% reduction in illegally dumped refrigerators. The current number of full-time WasteWatchers is 40, with a further 630 trained employees on duty, supported by additional personnel from the City of Vienna. The WasteWatchers are deployed at various times of the day and night, including Sundays and public holidays, and are identifiable by their marked gilets or badges. However, they may also be attired in plain clothes. The WasteWatchers concentrate their efforts on the removal of bulky waste, dog faeces, cigarette butts, shopping trolleys and food waste. Following comprehensive training in legal matters and conflict resolution, they take an oath of office as public supervisory bodies. They are authorised to demand identification, issue cleaning orders and refer offences to the relevant authorities in the event of non-compliance. The incorporation of the WasteWatchers signifies the implementation of a penalty system analogous to that employed by police forces, which underscores the necessity for a comprehensive examination of the public's utilisation of waste collection services. This is particularly pertinent given that, thus far, universal societal values have not been reflected in universal action.

Despite its evident importance for the aforementioned processes, the public litter bin is by no means a longstanding institution as we know it. Rather, it is an invention of the early 20th century. However, waste itself is as old as humans existed, and in broader terms, waste is the source of all growth in nature. It can therefore be considered an imperative mechanism of life. The handling of waste and the societal attitude towards it are fruitful indicators of a society's inner values and workings, specifically of shifts in priorities and ambitions. The public trash bin, an object of urban infrastructure that may appear ordinary, embodies a significant historical evolution tied to urban planning, public health reforms, and shifting societal attitudes towards cleanliness and waste management. The evolution of the public litter bin across Europe mirrors the continent's responses to industrialisation, sanitation crises and environmental awareness, reflecting broader transformations in governance and cultural priorities. The following will try to shed some light on those shifts and trends throughout (mainly) european history till the present day.

In medieval Europe, waste management practices were rudimentary and predominantly unregulated. Household refuse was frequently discarded directly onto streets or into open sewers, creating unhygienic conditions that plagued rapidly growing urban centers. These environments were characterized by pervasive odors, the proliferation of vermin, and recurrent outbreaks of disease. Cities such as Paris and London employed "rakers" or "scavengers" to collect and remove waste, often transporting it to designated dumping sites beyond city walls. However, the absence of centralized waste disposal systems or public receptacles meant that trash accumulation remained widespread and haphazard.

During the early modern period, as urbanization accelerated and Enlightenment ideas

emphasized the importance of order and hygiene, some cities began implementing basic waste management systems. These efforts, however, were primarily focused on maintaining the aesthetics of wealthier districts, with little provision for public waste disposal infrastructure. Instead, refuse was deposited in communal pits or designated dumps. The concept of the public trash bin, as an accessible and standardized tool for waste collection, had yet to emerge. It is evident that there is an interlocking between the concepts of physical cleanliness and developments concerning health and hygiene. These developments occurred concurrently with groundbreaking scientific medical discoveries. However, upon closer examination, it becomes apparent that there has been a gradual shift from a deeply superstitious school of thought and an image of the human being that was shaped by this superstition, towards a more scientific understanding of the world and the human body. The self was gradually replaced by a more rational understanding of the world and its inner workings. This shift in perspective led to a decline in the importance of the supernatural and a greater emphasis on the explainability of physical mechanisms and the conceivability of existence. The management of waste, which had previously been a peripheral concern, became a central issue as a result of this change in outlook.

The industrialization of the 19th century catalyzed profound changes in waste production and urban sanitation. The rapid influx of populations into cities significantly increased the volume of refuse, exacerbating public health challenges. Cholera outbreaks in the 1830s and 1840s underscored the critical need for improved waste management. In Paris, Eugène Poubelle, Prefect of the Seine, introduced a groundbreaking municipal initiative in 1884: standardized waste containers for household refuse. These "Poubelles," as they came to be known, mandated the separation of organic waste, paper, and glass, setting a precedent for organized waste disposal systems. Although initially met with resistance from residents and landlords, Poubelle's innovation profoundly influenced waste management practices across Europe. In London, public trash bins were introduced in the late 19th century as part of broader sanitation and street-cleaning reforms, with durable cast-iron bins becoming fixtures in urban landscapes, reflecting a growing commitment to public health and cleanliness. In Vienna during this period (1918), the „Coloniakübel" was introduced, accompanied by designated vehicles for its collection. This was inspired by the Swiss model of the „Ochsner-Abfalleimer" (1902), as well as comparable strategies employed in Cologne. These endeavours were undertaken in alignment with the overarching objective of optimising processes in a manner that would enhance efficiency and profitability. The prevention of disease and plague was not merely a matter of human decency in protecting the general population; it was also an effort to reduce the frequency of operational losses in the labour force. From a broader perspective, the rationalisation of waste management was a crucial step in the process of systemisation and standardisation.

The interwar period (1918–1939) marked a phase of standardization and expansion in the use of public trash bins across European cities. These receptacles were designed to balance functionality and durability, utilizing materials such as metal and concrete to withstand extensive public use. During this period, public awareness campaigns placed an emphasis on the civic duty of proper waste disposal, presenting it as an integral aspect of urban order and hygiene. Additionally, these campaigns highlighted for example the importance of paper disposal in supporting the national war effort, emphasising the need for adequate disposal practices to ensure the continued provision of paper to factories. Following World War II, advancements in urban infrastructure further entrenched the role of public trash bins as essential components of city planning. Innovations during this period included the introduction of lids to deter pests and specialized bins

to accommodate different types of waste, aligning with evolving societal and environmental needs. For instance, Germany's adoption of modular waste systems complemented its burgeoning culture of recycling.

The environmental movements of the 1970s and 1980s heralded a new era for public trash bins, transforming them into instruments of ecological consciousness. Recycling initiatives gained traction, leading to the introduction of color-coded systems for waste segregation. Cities such as Berlin and Copenhagen pioneered these approaches, with bins designated for paper, glass, and other recyclables becoming commonplace. Public campaigns underscored the importance of responsible waste separation, while municipalities integrated additional features such as ashtrays to address the issue of cigarette litter. During this time, public trash bins were increasingly recognized not merely as functional objects but as symbols of environmental stewardship. This development marks a pivotal moment in the history of waste management and, consequently, the evolution of the public litter bin. For the first time, there was a significant impact of proper waste disposal and separation that extended beyond immediate benefits for human health, urban cleanliness, and even the potential for supporting war fabrication. It was an effort to assist in the remediation of an environmentally degraded landscape. This necessitates an understanding of environmental issues as a process that affects humanity in some way. Additionally, it requires a recognition of the intrinsic value of the natural world, which extends beyond the mere extraction of resources. This includes the preservation of specific natural habitats and endangered species.

In the 21st century, the evolution of public trash bins has been shaped by technological advancements and sustainability imperatives. The advent of smart bins equipped with sensors to monitor fill levels has optimized waste collection, reducing inefficiencies and overflow. In cities such as Basel, Switzerland, these advances take shape in co-evolving processes of digitisation and an abundant reliance on app-driven device and commodity control, bringing these interlocking developments into an urban public aesthetic. Solar-powered compacting bins, widely adopted in cities like Amsterdam, enhance capacity by compressing waste, reflecting the integration of technological innovation with environmental objectives. Concurrently, urban design has embraced the aesthetic potential of trash bins, incorporating them into the broader visual language of public spaces. Behavioral interventions, such as interactive bins that produce sounds or gamify disposal, have been employed to encourage proper usage and reduce littering.

Despite their ubiquity, public trash bins face ongoing challenges, including improper use, overfilled receptacles, and difficulties in achieving effective waste segregation. The transition toward a circular economy in Europe underscores the need for these systems to facilitate material recovery and recycling.

The historical trajectory of the public trash bin in Europe illustrates its transformation from rudimentary sanitation tools to sophisticated elements of urban ecosystems. This evolution reflects the dynamic interplay between technological progress, public health priorities, and cultural shifts in attitudes toward waste.

Furthermore, the exposed location of the trash bin in an urban public space and its modular design, which allows it to be integrated into the base element of the pole, which is found throughout public access and traffic management infrastructures, provides an ideal surface for the informal and anonymous expression of thought and creativity. In combination with its status as a „common good," which will be discussed in greater detail later on, a commodity whose primary function is the disposal of waste and rubbish, and which is therefore associated with a lack of cleanliness, it is a location where artistic interventions and political statements can be installed with relatively little risk

of repercussions when detected. It is a location where the potential exists to appropriate a space designated for public service and transform it into a participatory communal space. An individual intervention becomes part of a broader movement and aspiration to disrupt the established patterns of public management services. It is notable that public trash has frequently been utilized as a symbol of rebellious representation in riots. For instance, during the riots in Paris due to Macron's pension reform in May 2023, trash bins were set on fire, symbolizing the discontent of the people with the state. Other parallels can be drawn to certain local rituals and customs. For example, in Berlin it is common practice to place glass bottles below or next to the bin in order to facilitate the collection of these items by people without shelter, thus avoiding the necessity for them to rummage through the contents of the bin. In Germany and Berlin in particular, the trash bin has become emblematic of the techno underground movement, akin to numerous other low-visibility infrastructures such as public transport and public restrooms. These have been reclaimed by the service providers of these infrastructures and are being used in advertisements that reinforce the open and hip self-image of a city, as evidenced in Vienna and Berlin.

As derivative from Gregory Sholette in his 2010 work Dark Matter, the defacement of trash bins could be seen as representation of a „[…] fantasy of autonomy," a phenomenon that is only possible in such an international and intercultural hub of state service as found in the public trash bin. It is a collective expression of unstructured sentiment towards society and politics, fueled by the desire for disobedience and opposition. This has already been reappropriated by the relevant authority, with exhibitions showcasing „street art" on waste receptacles, thereby reintegrating these elements into the advertising scheme.

The precise location of the public trash bin within the context of a responsibility narrative remains a topic of debate. While the bin is state-owned and provided, this designation as a public service is undermined by the invisibility of its maintenance, which is predominantly conducted during early morning hours and largely overlooked by the public. Additionally, the absence of regulatory or access-limiting apparatus on-site and the comprehensive utilisation of the bin as a canvas for expression and opinion contribute to a perception that challenges the previously mentioned understanding of a public trash bin.

In her 2015 publication, Reflections on the Commons, Elinor Ostrom identifies the public litter bin as an example of a collectively used good, despite being maintained and serviced. Unlike other goods that offer resources or pleasure, the litter bin does not provide any tangible benefits. Instead, it serves to improve the discomfort associated with waste management, a phenomenon that has been observed throughout history. The intrinsic value of the public litter bin is evident; however, it is frequently subjected to acts of vandalism, inadequate maintenance, neglect, and overfilling. As Aristotle observed, „Property that is common to the greatest number of owners receives the least attention; men care most for their private possessions, and for what they own in common less, or only so far as it falls to their own individual share[…]" (Politeia, Book II, ch. 3). This observation illuminates the public bin as a good that is used by every member of society in all societies all over the globe with sufficient funds to manage a comparable waste removal service. Furthermore, it embodies the role of deputy for concerns pertaining to environmental efforts, particularly in relation to the disposal of cigarettes. This is evidenced by the fact that every trash bin is equipped with a dedicated hatch or compartment for the disposal of cigarettes. This illustrates the interconnection between the common good of

the environment and the specific element of the trash bin.
Future debates will have to further advance the complexity of waste removal systems in regards to the separation of waste and the prioritisation of inclusive designs that accommodate diverse user needs. In addition, initiatives to deepen public engagement with waste management practices will be required. A trend that is already discernible in recent developments concerning packaging, consumption and a debate on the weight of sustainable quality over an abundance of aimless quantity. In a sense, the broadening of waste management systems has always occurred in conjunction with the growth of con-sumer needs and acquisitions. However, it may undergo a paradoxical evolution, whereby an increasingly complex and adjustable network of diverse applications is managing a shrinking amount of waste to be removed. Or so we would wish for.

Sources

Sholette, G. (2010). Dark Matter. Pluto Press.

Ostrom, E. (2015). Reflections on the commons. Cambridge University Press

George, R. (2008). The Big Necessity: The Unmentionable World of Human Waste and Why It Matters. Metropolitan Books.

Halliday, S. (2001). The Great Stink of London: Sir Joseph Bazalgette and the Cleansing of the Victorian Metropolis. Sutton Publishing.

Rosen, G. (1993). A History of Public Health. Johns Hopkins University Press.
Explores the relationship between urbanization, public health, and waste management.

Lynch, K. (1990). Wasting Away. Sierra Club Books.
Addresses attitudes toward waste and the cultural significance of disposal systems.

Stahel, W. R. (2016). The Circular Economy: A User's Guide. Routledge.

PHILIPP JAINZ
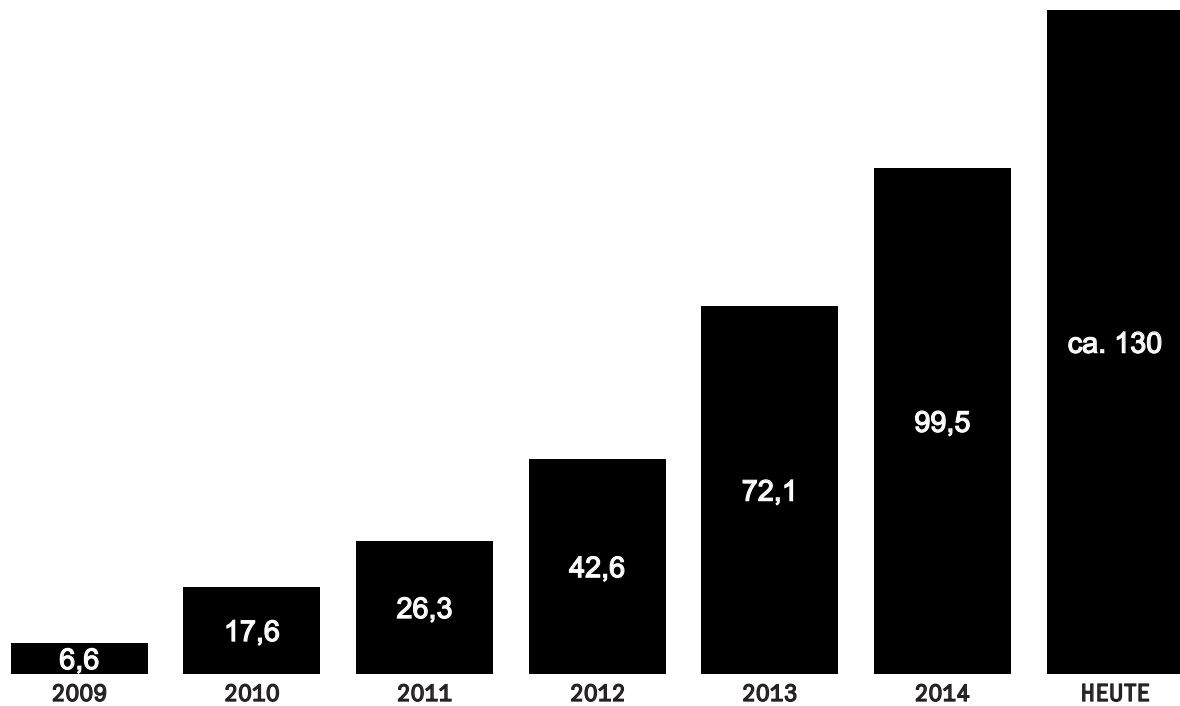
The public litter bin

fig. 1 entsorgte Tschickstummel, data: Stadt Wien, 2024

fig. 2 Trash disposal, photo: Philipp Jainz, 2025

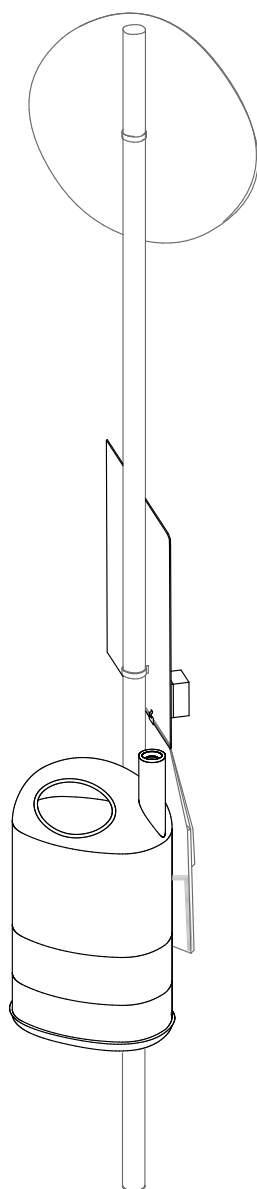fig. 3 Cigarette disposal, photo: Andreea Avram, 2025

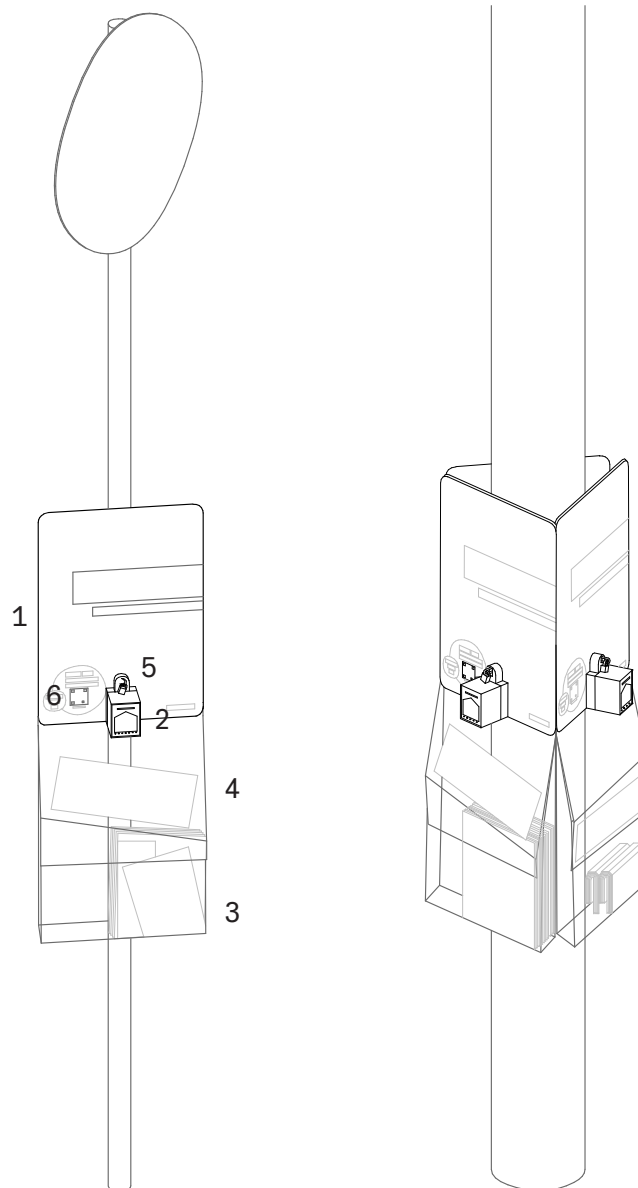fig. 4 Litter bin combined, photo: Andreea Avram, 2025

City pole

PHILIPP JAINZ
ANDREEA AVRAM

ANDREEA AVRAM

Sonntagsstandl

The Sonntagsstandl is a newspaper carrier attached to a pole. By inserting the coins into the metal box, the newspaper is paid for and can be taken from the unsecured plastic pouch.

Sonntagsstandl

The Sonntagsstandl, also known as the Selbstbedienungstasche (self-service bag) or simply SB-Tasche, and sometimes referred to as the Stummer Verkäufer (silent seller), is a newspaper carrier typically affixed to a traffic pole. Its design features a rectangular plastic sheet (1) with a small metal box (2) and two transparent plastic pouches - a bigger one (3) meant to hold the newspapers and a smaller one (4) that sits on top meant to protect the bigger one from rain. The pole has a metal belt onto which the carrier is attached and held in place through a padlock (5). By inserting the coins into the metal box, the newspaper is paid for and can be taken from the unsecured plastic pouch. One can purchase the newspaper through a subscription accesssible through a QR code (6).

In Vienna, the plastic sheets are usually red and prominently display the titles **Kurier** (messenger) and **Kronen Zeitung** (crown newspaper) in large white letters. Due to the similarity in their design I will describe only one of them: the **Kurier** sheet includes a tagline, "Faktenbasierter Journalismus" (fact-based journalism). To the left, a large white circle reads "**Kurier to go** – Das Sonntags-Abo mit Selbstabholung" (Sunday subscription with self-pickup), accompanied by a QR code and a contact number. Next to the white circle is a smaller black circle advertising "Jetzt 1 Jahr um nur €30,-" (1 year now for only €30). At the bottom right corner of the sheet, the website KURIER.at is printed in white text.

The small yellow metal box has a a white sticker with the price, "€2.20 DANKE." Above the sticker, a narrow slot is designed for inserting coins. A sturdy padlock secures the box to the pole with a metal belt and two U-shaped shackles, ensuring the carrier can only be removed by unlocking the padlock. While the metal belt stays permanently attached to the pole, the newspaper holder itself can be detached when needed.

The two plastic pouches vary in size: one matches the dimensions of the metal sheet, while the other is smaller. Both are open at the top for easy access. The smaller pouch contains a rectangular advertisement for **Kronen Zeitung** . The ad prominently displays the word „GRATIS" (free), advertising a free "Jahres Vignette" (annual vignette) with a subscription offer: "Jetzt zum neuen 15-Monate-Krone-Abo: Bequeme Hauszustellung. Nur €41,40 pro Monat" (Now with the new 15-month Krone subscription: Convenient home delivery. Only €41.40 per month). Additional benefits, like Friday supplements and Sunday features, are highlighted. A QR code and link (kroneabo.at/jahresabo) guide readers to subscribe. The ad also shows an illustration of a green vignette - GRATIS statt €103.80 (gratis instead of 103.80) with a red car driving into a sunrise/sunset.
The remaining newspapers are stored in the larger plastic pouch, and because it was the 25th of December when the picture was taken, only a few of the **Kurier** newspapers were still available.

The SB - Tasche can be found attached to lampposts, traffic signs, and bridge railings, always at intersections, near bus stops, trash cans, Caritas dispensers, and other public infrastructure, even along Stadtwanderwege (city hiking trails) and entrances to parks, in short anywhere where people transit.

Spaced a few hundred meters apart, they total 200,000 locations throughout Austria. The only map that I could find is provided by **Kronen Zeitung** and one can find all the newspaper's stands within a radius of 250 meters.[1]In my living area which is accessible mainly by bus, most of the Sonntagsstandln can be found within the bus route, which is how I started noticing how many are around.

What's actually inside the plastic pouches? Over the past 4-5 weeks, I've found an overwhelming amount of **Kronen Zeitung** and **Kurier** available. Der **Standard** is also an option, however much less are distributed altogether. Until recently, there were more choices, such as **Die Presse am Sonntag**, **Kleine Zeitung**, **Österreich** and **Wiener Zeitung** but these have all been discontinued over the last five years.

I find the concept of the Sonntagsstandl so appealing because it's built on a platform of trust. Customers decide whether to pay the full amount, part of it, or nothing at all—essentially determining the value of the product themselves. STADTBEKANNT's magazine captures the essence of the Sonntagsstandl, saying:
„Without our 'To-Go Newspaper' on Sundays, Vienna simply wouldn't be Vienna. Whether someone pays a lot, a little, or deliberately takes free copies every week because the system feels like it's begging to be exploited—it's all part of the charm of how accessible it is."[2]

However, with the shift in media consumption from printed newspapers to online subscriptions, and the decline of trust-based systems in general, we may be witnessing the beginning of the end for the Sonntagsstandl.

The first Sonntagsstandl

The first version of the Sonntagsstandl was introduced in 1962 by Kurt Falk from Neue **Kronen Zeitung**. Sellers at Tabak Traffik - tobacco shops where one could buy magazines, lottery tickets, lighters, birthday cards, cigars, cigarettes, and more - had Sundays off, creating the need for an alternative method to sell newspapers. Although the coin-operated newspaper vending machine had been invented in 1947 by George Thiemeyer Hemmeter in the US and later adapted in Germany, Austria opted for a different design. Initially mocked by competitors, the Sonntagsstandl quickly proved to be the most successful sales method, thriving in both urban and rural areas due to its accessibility.

The logistics behind the distribution of the newspapers is often not talked about. I've never seen the Sonntagsstandl being taken off, but I do often see it on early Sunday morning when the workers put them up. An opened van with two or three individuals, usually men, roams the streets in the quiet of the night.

On the site PDW Zustellservice one can find the application form to become a delivery partner for **Kronen Zeitung** and **Kurier** in Vienna, Lower Austria, Burgenland, Styria, Carinthia, East Tyrol, and Vorarlberg. The questions are as follows:
"Are you interested in partnering for daily home deliveries or setting up self-service devices on Sundays and holidays?
Are you looking for a side job on a freelance contract basis?
Are you interested in performance-based additional income?
Are you familiar with your residential area and own a vehicle?
Do you have free time in the early morning hours?"[3]

I couldn't find details about how many people are needed to distribute to all 200.000 locations in Austria, what the payment and conditions of the job are, but one article by the **Standard** from 2011 describes the working conditions from the perspective of Maria Fandl, Sonntagsstandl distributor for **Der Standard**, **Die Presse am Sonntag** and **Wiener Zeitung**.

Fandl makes a clear distinction between free newspaper distribution, such as **Heute**, which is less physically demanding and often done by female workers, and the Sonntags-standl job, which involves assembling and setting up the devices. Working hours depend on the printing company's schedule, with everything needing to be completed by 6 a.m., requiring more physical labor, typically performed by male workers.

Most of these workers are migrants which have limited access to the broader job mar-ket: „The primary reason for self-employment is precarious residency status. In essence, all characteristics of a dependent employment relationship are present," says Judith Hörlsberger of the Vienna Legal Advice Center for Migrants. Today, the job is primarily handled by younger workers with an average work expectancy of 1-2 years. In the past, retirees were the main workforce, some with over 20 years of experience in delivery jobs. Moreover, what I found very interesting about the Sonntagsstandl design is that the de-vices are slightly different: „It's a very responsible job. I used to think it was mindless work that only foreigners did. My perspective changed when I saw how tough the night work is, how complex the assembly process is, and how many different hooks each media house uses,"[4] Fandl explained.

Who reads the newspaper?
According to Sergio Sparviero and Josef Trappel from the Reuters Institute, 4.3 mil-lion readers - well over half of Austria's adult population - purchased daily printed or digital newspapers between mid-2020 and mid-2021. Despite a decline in newspaper usage overall, Austria still boasts the second-highest rate of readership (42%) among surveyed countries, second only to India.[5] The sales of daily newspapers continued to decline since 2021 and whilst most of the newspapers are also available in online format through a subscription, the rise in sales of e-papers is modest.[6]

Fesih Alpagu wrote an article for skug musikkultur in 2023 describing his relationship with the self-service newspapers bags. In Vienna, where most stores are closed on Sundays, buying a Sunday newspaper from a Sonntagsstandl became a unique cultural experience, helping him learn German better and gain insights into Austrian society:
 "What a great idea! […] Of course, you can also just take the newspaper without put-ting any money in the box. As far as I have observed, most people have either taken newspapers without putting any money in the box or they have only put a few cents in. I have to admit, I didn't always have the exact amount with me either, but I tried to be as honest as possible."[7]

Among newspapers, **Kronen Zeitung** is by far the most widely sold in Austria. According to de.statista.com, it sells 953,436 copies every Sunday and 540,000 copies on week-days, compared to **Kurier**, which sells 231,013 copies on Sundays and 100,000 during the week. Both are printed and sold by Mediaprint, a company they have shared since 1988. Moreover, during the pandemic, **Kronen Zeitung**, **Österreich**, and **Heute** received significant central government public advertising funds—€47 million in 2020 and €45.3 million in 2021—despite political scandals surrounding these publications.[8]

The **Kronen Zeitung** was founded in 1900 in Vienna. The tabloid alternates between social democratic, conservative and often right-wing populist depending on the context. Fifty percent of the daily newspaper is owned by the Dichand family of publishers, with a quarter each by the Funke media group and billionaire René Benko.[9] While the **Krone** prides itself on "not being among those that can be bought," the Ibiza-gate corruption scandal from 2019 highlighted the tabloids potential involvement in politics.[10]

The Sunday edition offers a subscription called **Krone to go** for €30 per year, compared to €2.20 per single issue. Additionally, there are 70,000 self-service devices available across Austria.[11] Of its 540,000 subscribers, only 6% are digital, in spite of all online content being for free. Businesses can also use the Sonntagsstandl for advertising by inserting a 400 × 185 mm flyer into the plastic bag for €561.74 per 1,000 copies, with a maximum of 77,000 copies.[12]

The **Kurier** was founded as **Wiener Kurier** by the United States Forces In Austria (USFA) in 1945. In 1954, Ludwig Polsterer purchased and re-established it as **Neue Kurier**. The daily paper is a blend of tabloid, magazine, and traditional newspaper formats. Raiffeisen Bank owns 50.56% of the newspaper, with the Funke Media Group and René Benko each owning nearly a quarter.[13] The **Kurier** Sunday edition offers the same **Kurier to go** subscription as the **Krone**, priced at €30 annually instead of €2.20 per issue, with 32,000 Sonntagsstandl spots available across Austria.[14]

Another newspaper that uses the Sonntagsstandl's infrastructure is **Der Standard**. The newspaper was founded by Oscar Bronner in 1988 in Vienna after the example of New York Times, and it describes itself as liberal and politically independent, being considered centre-left as political orientation. According to Media-Analyse 2023 the cross-media reach for **der Standard** is 832.000 readers through online and printed media, with a number of 60.146 of copies bough weekly, thus reaching 10,8% of people over 14.[15]

In contrast to other newspapers discussed in this paper, **der Standard** does not provide a dedicated Sunday/holiday edition. Instead, it offers a weekend edition, available at the Sonntagsstandl for around €3. The printing is managed by Mediaprint, and the paper is uniquely printed on salmon/rose-colored paper, making it the only Austrian newspaper to use colored paper. **Der Standard** was also the first German-speaking newspaper to launch an online presence in 1995. Digital subscriptions start at €1 for a one-month trial and cost from €7.48 per week for the digital version of the print edition after the trial period.[16]

Dicontinued Sonntagsstandl

The first to discontinue its Sunday edition was **Die Presse am Sonntag** in April 2020, shortly after the COVID-19 pandemic began. Founded in 1848 during the March Revolution, **Die Presse** describes itself as „bourgeois-conservative" and is owned by Styria Medien AG, a Christian media and publishing group.[17] The broadsheet newspaper is Austria's most widely read quality newspaper with 315.000 readers (4.2% of Austrian population) and 60.000 subscribers, over 40% of whom are digital.

Die Presse am Sonntag debuted on March 15, 2009. In 2019, more than 20,000 copies were distributed via the Sonntagsstandl, with 58,000 delivered through subscriptions in printed form. Both **Die Presse** and **Der Standard** used the same distribution company

for Sunday editions. Ultimately, Christian Ultsch, editor-in-chief of the Sunday edition, announced that self-service purchase would no longer be an option.[18] The home delivery subscription for Sunday costs 35.99 euros for the first 6 months.[19]

The second newspaper to stop the use of the Sonntagsstandl, was **Kleine Zeitung** on June 26, 2022. Founded in 1904 by the Catholic Press Association as a newspaper for „common people,"[20] **Kleine Zeitung** is a regional daily with center-right political leanings. Published in 18 regional editions across Styria, Carinthia, and East Tyrol, the paper reaches around 800,000 readers. It is wholly owned by Styria Media Group AG.

„One must understand that silent sales increasingly became free distribution. At their peak, we had around 90,000 newspapers in the Sonntagsstandl, but only 5 to 8 percent of these were actually paid for,"[21] says Walter Hauser, head of the reader market at the **Kleine Zeitung**. This situation, he explains, is no longer justifiable toward paying subscribers. Instead, the weekend home delivery subscription costs 46.11 per half of an year or 15.37 euros per month.[22]

The third publication to discontinue its Sunday printed edition was **Österreich** on September 11, 2022. First launched in September 2006 by Helmut and Wolfgang Fellner, who also served as owners, publishers, and editors, the newspaper is based in Vienna and owned by Mediengruppe **Österreich** GmbH. With a conservative political alignment, the tabloid ranked as the second-largest Sunday print media outlet, distributing 365,754 copies in 2022.[23] At Tabak Trafik, a printed weekday version cost €2.90, while the Sunday self-service edition was priced at €1.30. Additionally, a thinner version of the tabloid is still distributed for free at train stations, subway stations, and other high-traffic locations in the city.

Niki Fellner, the new CEO of Mediengruppe **Österreich**, explained the decision to discontinue the Sonntagsstandl in a statement, citing the „complicated and extremely labor-intensive logistics of Sunday newspapers," which are now considered „outdated." Fellner added, „The high costs of paper and fuel make it impossible to produce the Sunday newspaper profitably."[24] Furthermore, Mediengruppe announced the closure of its printing facility in Tulln, Lower Austria. Starting in 2023, the newspaper has been printed by its main competitor, Mediaprint. The standard subscription, which includes home delivery from Monday to Friday, costs €33.90 per month, with the first three weeks available as a free trial.[25] In addition, **Österreich** launched a 24-hour news television channel, **oe24TV**, in cooperation with CNN.

The fourth newspaper to renounce its printed form altogether was the Wiener Zeitung, on June 30, 2023. Recognized as the world's oldest continuously published daily newspaper, it first appeared in 1703 as the Wienerisches Diarium, aiming to provide a sober account of the news „without any oratory or poetic gloss."[26]   Since 1857 the Austrian government owns Wiener Zeitung, however it is editorially independent and regarded as liberal.

However, the abolition of mandatory corporate advertisements in the official bulletin section of the Wiener Zeitung, a policy included in the coalition agreement between the ÖVP and the Greens, significantly impacted the paper's finances. These advertisements had contributed €18 million annually to its revenue.[27] As a result, Wiener Zeitung could no longer afford to publish in printed form.

The paper now prints a minimum of 10 issues per year, subject to available funds. The transition led to the loss of 65 jobs, leaving only 20 employees by 2023. Despite this, the newspaper's website listed 63 authors by the end of 2024.[28] Previously, weekday print runs were around 14,000 copies, while weekend editions reached 39,000. Today, the website is accessed for free, with a total of 500,000 to 1,000,000 online visits.[29] The Wiener Zeitung also engages readers through platforms like newsletters, Instagram, TikTok, YouTube, LinkedIn, and its magazine.

In response to the changes, a group of former Wiener Zeitung journalists founded Das Feuilleton, a new printed newspaper that publishes bi-monthly issues—11 by the end of 2024—funded through successful crowdfunding campaigns. Das Feuilleton can be purchased in Tabak Trafik shops or accessed online as an e-paper.[30]

The uncertain future of the sonntagsstandl

Through the monopolization of the Sonntagsstandl by **Kurier** and **Krone** and the streets with free tabloids like **heute** and **oe24**, one is constantly reminded of the political situation in Austria and how fast public space can change within a few years. Fesih Alpagu comments on the disappearance of Wiener Zeitung, the oldest daily newspaper in the world: "The Wiener Zeitung has outlived many other organs and cheese papers whose disappearance is regrettable or bearable: Arbeiterzeitung, Basta, täglich alles, Spatzenpost, no, they still exist … And what did we get? **Österreich** and **heute!**"[31]

The reason why I find the Sonntagsstandl so appealing is the luck that one is dependent on in order to find the newspaper of their choice, the way to the self-service device and back and the anonymity of the purchase. With a subscription, one does not have to get out of the home anymore, nor is the ad hoc choice of buying the newspaper at hand – it demands a phone/laptop, a bank account and an address.

Whilst it is hard to predict the future of the Sonntagsstandl, the rapid changes within media format and thus accessibility suggest a transformation from an exchange point to a mere street accessory, oftentimes filled with advertisements and used as a board for stickers – and eventual total disappearance. The stickers that I found comment on the newspapers that can be found inside, **Kurier** and **Krone**, with messages as: "DAS IST EIN EI. Wenn Sie hier einen Apfel sehen, sind Sie ein rechtsextremer Schwurbler" (THIS IS AN EGG. If you see an apple, you are a far-right conspiracy theorist) and "FUSSBALLFANS GEGEN MEDIENHETZE" (FOOTBALL PLAYERS AGAINST MEDIA AGITATION) with three pictures of **Heute**, **Kronen Zeitung** and **oe24** crossed out under.

A possible future of the Sonntagsstandl could be something similar to the former phone boots and newspaper vending machines: the ones that have not been taken away from the streets serve as exchange boxes for books and other media. They can be found close to bus stations, inside of parks and other public infrastructure. These spaces can become social and the devices are still used within a system of trust.

The difference of the Sonntagsstandl is that due to its design as a temporary attachment to other infrastructure in the city it's very easy to remove it, the only trace left behind being a metal belt on the pole that it was attached onto. Could they become an exchange point or could something else be attached instead of them?

Some of the self-service devices remain attached to the poles at all times, creting a network of permanent exchange within a city. Could the foreseeable future bring a parallel usage to the Sonntagsstandl, one depending on the continued distribution of Kronen and Kurier within the whole country, however offering an alternative product during the rest of the week - an exchange of the residents using the given infrastructre for their own benefit?

Another alternative would be using the numerous metal belts in order to attach something else instead which would potentially lead to the mere blocking of the distribution of the Sonntagsstandl, at least temporary - a form of protest that questions what is dispensed inside. Who benefits out of the distribution of the main newspaper companies today? Is trust still an essential part of the concept of the Sonntagsstandl or did the design change from an exchange model to a „free" model - who is the product and what is being bought?

1 https://sonntags-abo.krone.at/dispensers-map
2 https://www.stadtbekannt.at/sonntagsstandln/
3 https://www.pdw-zustellservice.at/de/zustellpartner-werden
4 https://www.derstandard.at/story/1319181470438/nachtarbeit-stummer-verkauf-ein-job-mit-vielen-haken
5 https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2022/austria
6 https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2024/austria
7 https://skug.at/zeitungen-von--der-stange/
8 https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2022/austria
9 https://de.wikipedia.org/wiki/Kronen_Zeitung
10 https://www.france24.com/en/20190921-fuelling-populism-and-influencing-votes-austria-s-biggest-tabloid
11 https://angebote.krone.at/krone-to-go-abo
12 https://business.krone.at/download/325/sonderwerbeformen-tarife-2024
13 https://en.wikipedia.org/wiki/Kurier
14 https://sonntags-abo.kurier.at/welcome
15 https://de.wikipedia.org/wiki/Der_Standard#Onlineausgaben
16 https://abo.derstandard.at/produkte/print/#klassik
17 https://de.wikipedia.org/wiki/Die_Presse
18 https://www.derstandard.at/story/2000116304900/die-presse-stellt-sonntagsver-trieb-ueber-selbstbedienungstaschen-ein
19 https://abo.diepresse.com/produkt/s24324_neo_6m/
20 https://www.eurotopics.net/en/183297/kleine-zeitung
21 https://steiermark.orf.at/stories/3162256/
22 https://abo.kleinezeitung.at/printabo-angebote/
23 https://de.wikipedia.org/wiki/%C3%96sterreich_(Zeitung)#cite_note-7
24 https://www.derstandard.at/story/2000138503184/fellner-gruppe-stellt-print-sonn-tagsausgabe-von-oesterreich-ein
25 https://abo.oe24.at/index.php?option=com_content&view=category&lay-out=blog&id=49&Itemid=218
26 https://apnews.com/article/vienna-wiener-zeitung-newspaper-ends-daily-21376b5b0154bde12451f12d962e2e51
27 https://www.spiegel.de/kultur/wiener-zeitung-aelteste-tageszeitung-der-welt-zum-letzten-mal-erschienen-a-fe1520d0-3c3a-44a2-a483-cfa333d7548e
28 https://www.wienerzeitung.at/e
29 https://www.eurotopics.net/de/148862/wiener-zeitung#
30 https://feuilleton.online/
31 https://skug.at/zeitungen-von--der-stange/

ANDREEA AVRAM

Sonntagsstandl

fig. 1 More platforms, photo: Andreea Avram, 2024

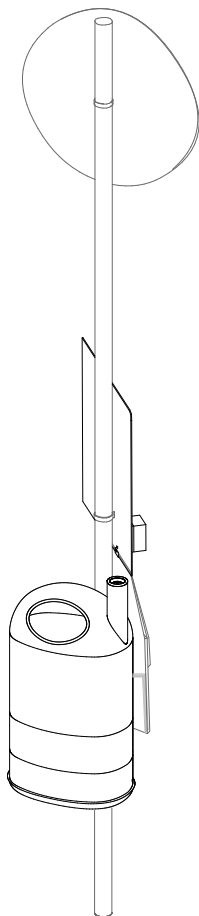fig. 2 Kronen Zeitung + Kurier + Der Standard, photo: Andreea Avram, 2024

fig. 1 Kurier Sonntagsstandl, photo:anonymus reddit, 1972

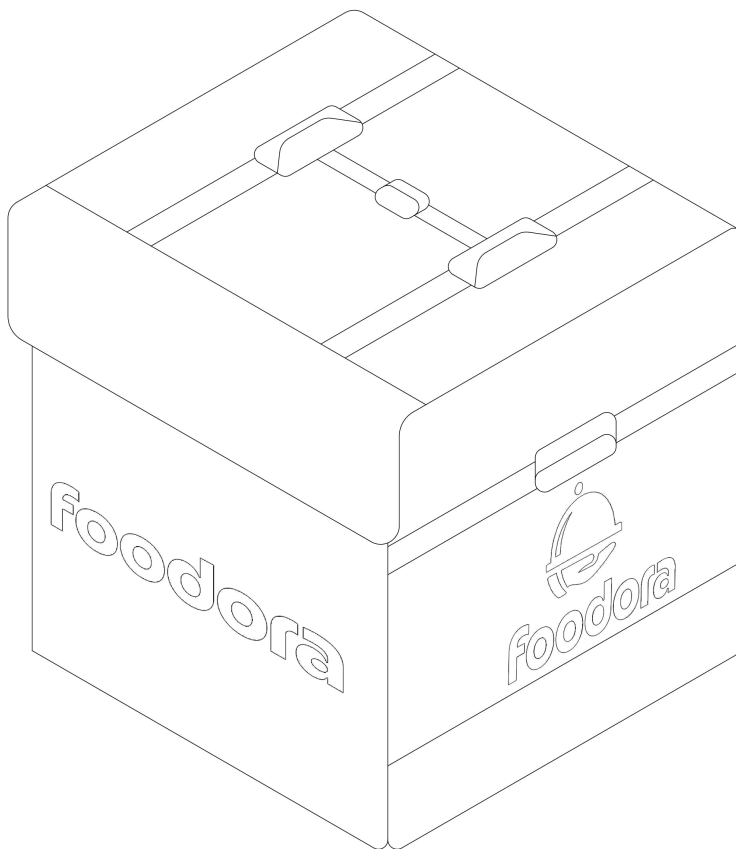fig. 2 Eine Selbstbedienungstasche der „Presse am Sonntag", photo: Der Standard, 2020

City pole

ANDREEA AVRAM
PHILIPP JAINZ

EDRA GJINOLLI

FOODORA Backpack

The neon-pink Foodora bag is a common sight in the city, carrying food and connecting people through delivery services. Its simple design reflects the quick, everyday movement of the gig economy.

FOODORA Backpack

What does a neon-pink delivery bag tell us about the city we live in?

Living in Vienna, I've come to see the neon-pink Foodora bag is more than just a delivery tool. Every time I see a cyclist speeding by with one on their back, I can't help but think about the contradictions it represents the digital convenience for some, and uncertain, unstable work for others. It's a small but powerful symbol of how platform capitalism has quietly reshaped our cities, often at the expense of those who keep it running. It bring together the tensions between gig work, urban life, and environmental concerns, inviting us to explore its far reaching implications for labor, urban spaces, and sustainability. The Foodora bag is not merely a functional object; it shows us the challenges and insecurity faced by gig workers delivering food in Vienna and beyond. Foodora, like many other platform companies, depends on a business model that designates its workers as independent contractors rather than employees. This classification lets the company to avoid providing benefits such as health insurance, paid leave, or even a guaranteed minimum wage.

Platform Capitalism and the Control of Gig Labor

As I researched the lives of these delivery riders, it became clear that they are under the power of algorithms that determine their schedules, routes, and even pay. This aligns with the analysis in the book of Srnicek's Platform Capitalism (p. 44-45), which critiques the ways platforms extract value from labor while externalizing different risks. Many riders are young individuals or migrants who take on these jobs for the sake of flexibility, however, they frequently face low wages and excessive workloads struggling to get by in a system that values efficiency more than human well-being. As noted on Platform City and Its Discontents "the city itself becomes a site of algorithmic governance, where the logic of optimization, efficiency, and data-driven decision-making replaces traditional urban planning models" (Mörtenböck and Mooshammer, 2021, p. 31-32). This concept applies directly to Foodora, where couriers routes, delivery times, and even wages are determined by an algorithm that aims to maximize the platform's efficiency and profits. The algorithm doesn't just manage the logistics of food delivery. It dictates the flow of labor through the city. Couriers must follow the algorithm's direction in navigating urban streets, often with little regard for the city's social needs or the well-being of the workers themselves.

Focusing on urban spaces these platforms "re-organize the city as a logistical system, turning public streets into delivery routes and reshaping the concept of urban space" (Mörtenböck and Mooshammer, 2021, p. 28-29). The streets of the city are transformed into spaces that serve the needs of the platform rather than the needs of residents or public life. In this model, urban space becomes fragmented, optimized for transactions, and increasingly disconnected from social or communal uses. So far it's visible that critiquing on „distributive architecture" it resonates that platforms reshape urban spaces into networks of labor and consumption, while workers absorb the physical and psychological toll.

Precarity and Algorithmic Governance

This precarious labor dynamic fits perfect also into Foucault's concept of "Homo Oeco-nomicus" from his critique of neoliberalism, where individuals are compelled to optimize their productivity in a competitive marketplace (Foucault, 2008 p.273-276). For Foodora riders, this manifests in the constant pressure to accept orders, regardless of unfavor-able conditions, to maintain their ratings and secure future work.
Platforms like Foodora do not simply mediate transactions they actively shape urban economies by collecting and monetizing data. Every route taken, every order delivered, and every customer rating contributes to a huge dataset that the platform uses to op-timize operations and maintain the dominance on market. Meanwhile, riders absorb the risks, traffic accidents, irregular income, and job insecurity while remaining left out from the profits generated by this data-driven model. Nick Srnicek's critique of data extrac-tion is particularly relevant in the case of Foodora, as it highlights the dual processes of exploitation and commodification inherent in platform labor (Platform Capitalism, 2016, p.60- 65).
The mechanisms of data capitalism go beyond simple transactions. They incorporate a systematic harvesting of behavioral data to refine and intensify control over workers. For Foodora, this translates to a surveillance-driven work model where every rider's move becomes part of a wide ranging feedback loop, optimizing delivery algorithms while establishing the precarity of labor. Workers are subjected to constant monitoring through GPS tracking and performance metrics, which not only dictate their daily rou-tines but also erode their autonomy and capacity to challenge the system. Merging of Srnicek's perspectives he underscores the broader implications of platform capitalism: a labor force rendered submissive by algorithmic oversight, neverthelees it's important to the platform's accumulation of power and profit on (Platform capitalism, 2016, p.47-49). Riders often have little control over the algorithms that dictate their work conditions as these systems fulfil double functions of efficiency and worker oversight. These algo-rithms are not neutral tools but mechanisms for extracting value and exerting control. Algorithms monitor riders movements, prioritize routes for maximum profit and adapt dynamically to user demands, often at the expense of the riders autonomy. Such practi-ces highlight the broader implications of algorithmic governance, where data collection feeds into a cycle of optimization that keep alive precarity while systematically benefi-ting the platform's profitability. From the routes they must follow to the pay they recei-ve. The platform's opacity worsen their precarity, leaving them vulnerable to unforseen changes in policies or earnings. This is how neoliberal beliefs justify unfair practices in the name of growth and innovation.

The Social and Environmental Costs of Gig Work

On the other side Guattari makes us to think about the strong links between social, environmental, and mental well-being as he highlight them as ecologies (The Three Eco-logies, 2000, p.53). He critiques how neoliberal capitalism makes problems in all three areas worse. For example, gig workers mental health is impacted by the constant pres-sure of algorithmic control and job insecurity. Socially, the gig economy deepens in-equality in cities, creating a group of workers who are seen but pushed to the margins in terms of income and social status. At the same time, the environment suffers from unsustainable practices, such as the overuse of bicycles for deliveries, which may seem eco-friendly but hide larger problems in the system. His framework helps to understand these issues as interconnected, requiring a broader response to the impact of platform

capitalism. Having Foodora as an example, while relying on bicycles may look environmentally friendly, the high turnover of riders and the intense workload have bigger consequences. Socially, the gig economy worsens inequality, creating a group of workers who are visible in cities but left out economically and socially. This matches well with the idea that Guattari presents abput social ecology, which looks at how connections between people are weakened under neoliberal systems (Guattari, 2000, p.63-64). In the gig economy, the focus on individual work cuts workers off from each other, breaking down community support systems. By putting profit over social well-being, these platforms deepen divides and stop communities from becoming stronger. Mentally, the pressure from constant algorithmic management leads to stress and burnout, something Guattari warned about in terms of the decline of mental health under capitalist systems (Guatari, 2000, p. 65).

Urban Infrastructure and Public Space

Vienna, with its extensive network of bike lanes and its compact urban design, has become an ideal environment for food delivery services, offering clear advantages in terms of accessibility and efficiency for such businesses. However, these same features also reveal a more troubling side: how the city's infrastructure is increasingly being used to support labor models that exploit workers. As described by Mörtenböck and Mooshammer about these platforms, The Foodora bag, can be seen throughout the streets as a pattern of them, which is increasingly privatizing the public spase and convert it into private logistic zone, later transforming the cities on "service territories" that cater to the needs of the platform's business rather than to broader public concerns (Mörtenböck and Mooshammer, 2021, p. 14-18). For example, couriers often occupy sidewalks, bicycle lanes, and even public parks as they deliver food, turning these spaces from public gathering areas into sites for service delivery. Public infrastructure such as roads and traffic systems are now optimized for the fast and efficient delivery of goods, which may include prioritizing speed over pedestrian safety or local residents needs. These public spaces are becoming everyday more fragmented and less communal which once was meant to facilitate the social interaction and public life now are being repurposed for the benefits of platforms and their bussines models. This privatization extends also to the commodification of labor, where the couriers are tasked to navigate through the public spaces, while contributing to the commercialization of the public infrastructure. The Foodora bag serves multiple purposes within the gig economy model, intertwining functionality and visibility in ways that reinforce systemic power dynamics in urban spaces. From a functional perspective, the bag is carefully designed to keep meals warm, secure orders, and ensure riders safety through enhanced visibility. On the other hand, its design also serves as a visible marker of labor precarity. It's clear that objects within digital economies often embody and enforce the control mechanisms of platform capitalism. The Foodora bag shapes this two roles: a tool for practical efficiency and a symbol of dependency within the power structure of gig economy framework. Its visibile presence on Vienna's streets transforms riders into mobile advertisements, commodifying their labor and tethering their identity to the platforms brand. This dynamic make stronger urban hierarchies, separating consumers and gig workers within public spaces while discreetly emphasizing the economic inequalities underpinning their interactions.

Decline of Local Business

While Foodora provides exposure to local restaurants, the platform often imposes high commission fees, ranging from 20% to 30%. For small, independent businesses operating on small profit margins, these fees can be devastating. Restaurants that partner with Foodora may find themselves trapped because they count on the platform for visibility and sales, but the commissions degrade their earnings, making survival increasingly difficult. Over time, this creates a brutal cycle. Larger chain restaurants, which can get these fees more easily, dominate the platform, while smaller, community-focused establishments struggle or close down. This combination of market power in the hands of bigger players bears down on the diversity of urban food culture. This selective focus on rich areas reinforces a gentrified consumption model, where dining experiences shift from local, community-based options to globally marketed, high-end food choices. Shifting from dinning to delivery is having a big impact on how we experience dining, both culturally and socially. Culturally, eating out used to be a special event, a chance to enjoy a meal together and connect with others. Now, with delivery at our fingertips, we can skip the restaurant experience entirely and eat in the comfort of our own homes. Socially, this means fewer shared meals at restaurants, and instead, people are more likely to eat alone or with a smaller group at home. The change affects not just how we eat, but how we spend time with others and how restaurants operate, pushing them to adapt to this growing demand for convenience. It's reshaping our relationship with food and how we connect over a meal. Also the neighborhoods gentrify, the cultural landscape changes, with the vibrant, diverse food culture replaced by homogenized options catering to wealthier residents. Foodora's role in reshaping urban consumption patterns contributes to the displacement of local businesses and accelerates the cultural transformation of cities, where public spaces and services are increasingly designed for wealthier, consumer-driven communities. This deepens inequality by limiting access to convenient services for lower-income residents, further making stronger the divide between different groups. The platform economy's effects on cities go beyond technology, directly impacting the physical, social, and economic fabric of urban life.

Riders Voices

On platforms like Reddit, riders express their frustrations openly, where they sincerely open a window into their daily struggles and concerns. One rider shared how the platforms algorithm often assigns long-distance deliveries with a very little consideration for efficiency or compensation, wich later leads to frustration and financial strain. Another comment brought up the concern about the physical toll of carrying heavy bags over long shifts, intensified by different weather conditions. These comments are not unseen they collectively highlight systemic issues such as unpredictable income, lack of support during emergencies, and the uncertainty of trusting on a platform that can change policies without notice. Riders also express moments of solidarity and resilience, as seen in organized strikes or collaborative efforts to demand better pay and working conditions. Some even shared how the game-like nature of the platform, where high ratings unlock better shifts often left them feeling trapped in a cycle of overwork and anxiety. These firsthand accounts bring a humanized perspective to the broader critiques of platform labor found in the literature, emphasizing the urgency for reform in the gig economy. Posts reveal common grievances, including unpredictable income, the cost of bike repairs, and the lack of adequate support from the platform.

Possible Solutions: Cooperative Platforms and Policy Changes

The pink Foodora delivery bag has become a familiar sight around different districts of the city, it's an emblematic of the comfort driven culture of the digital age. Having in mind other aspects, its visibility also raises uncomfortable questions such as; what does it mean that our cities rely so heavily on a workforce that is underpaid and overworked? How do we reconcile the efficiency of on demand services with the inequities that under-pin them? To reconcile these, we need policies that protect workers, ensure fair wages, and consider the well-being of those who make these services possible, balancing convenience with social justice.

Other cities, such as Berlin and Amsterdam, face similar challenges but also offer glimpses of alternative models. For instance, cooperative delivery platforms like CoopCycle have emerged in Europe as worker-owned alternatives to corporate platforms. These cooperatives prioritize fair wages and worker autonomy, demonstrating that it is possible to reimagine gig work in more equitable terms. A significant milestone in the fight for gig workers rights was the 2018 European General Meeting of delivery workers held in Brussels. This gathering brought together riders from multiple countries, including Austria, to share strategies and push for decent working conditions. The event highlighted the need for global cooperation in dealing with the common challenges of the gig economy. Taking into account insights from Network Culture such movements draw attention to the potential of collective resistance in the digital age (Terranova, 2004, p.77). She discusses how the digital economy often exploits „free labor" from workers who contribute content and data without fair compensation, a phenomenon that is deeply embedded in the gig economy. She highlights the economic inequalities that arise from this exploitation, where workers create value, but platform owners reap the rewards as always. In this context, cooperative models like CoopCycle challenge the status quo by creating fair wages and worker control it also offers a glimpse into a more just digital economy. These movements demonstrate that by using the interconnectedness of digital networks, workers can organize, share strategies, and resist the inequities holed up by corporate platforms. We can go deeper into how algorithmic governance shapes these futures. Algorithms not only rule current labor dynamics but also offer speculative scenarios where their functions can be redesigned to empower workers. Seeing in one's mind platforms that decentralize algorithmic control could make the way for fair gig economies. Additionally, one could imagine data being used to prioritize worker well-being rather than corporate profit, creating a vision of labor where transparency and fairness are dominant (Srnicek, 2016, p. 65-69). Applying speculative approaches to Foodora, we might imagine a future where riders roles are no longer risky but integrated into a cooperative urban system. This could include technologies that allow riders to self-organize routes or platforms that prioritize ethical labor practices over profit maximization. Speculative practices open up possibilities for radically rethinking how we value and support platform labor. I think cooperative platforms offer a real solution to the challenges that Foodora riders face. By coming together, workers could collectively manage a delivery service that prioritizes their well-being over profits. In a place like Vienna, local governments and universities could support these kinds of initiatives, providing funding and infrastructure to help cooperatives succeed. It's important to talk about empowering marginalized groups and to find agency within the constraints of capitalist systems. However, when you zoom out and think about the larger picture of platform capitalism, it's clear that creating cooperatives alone might not be enough. Platforms like Foodora are built in such a way that they're always expanding and consolidating power. Even if gig workers manage to set up their own cooperative, these platforms' huge resources espe-

cially their data and financial power would likely still overwhelm them. The deeper issue is that these platforms are designed to extract wealth in ways that amplify inequalities, and this becomes more apparent as they keep growing.

We can look to policy changes, like setting minimum wage standards, requiring social benefits for gig workers, or making platforms more transparent, as important first steps. But these changes, while helpful, only scratch the surface. They don't deal with the root issue such as the monopolistic nature of these platforms. As we've seen in the rise of companies like Amazon, platforms tend to move toward a model where they extract more from the people who depend on them. Even with regulations, they still manage to amass massive power, and that can leave gig workers and smaller businesses in a constant struggle.

So, I think we need to think bigger. Instead of only regulating these platforms, what if we focused on creating alternatives? Public platforms, ones owned and controlled by the people, could be the key. These platforms could be run like public utilities, designed to serve communities rather than private profits. If the state invested in the technology needed to run such platforms, we could see a shift in how data and resources are used not just for profit, but to benefit the public good. It's a way to reduce exploitation and create a more democratic, fairer system. By thinking on these terms, we're not just responding to the problems with gig work, but we're imagining a new way forward. A future where platforms don't just serve the few at the top, but everyone in society. It's about creating a future where the digital economy works for the people, not the corporations.

Bibliography

- Foucault, M. (2008). The Birth of Biopolitics: Lectures at the Collège de France, 1978–1979 (G. Burchell, Trans.). Palgrave Macmillan.
- Guattari, F. (2000). The Three Ecologies (I. Pindar & P. Sutton, Trans.). Athlone Press.
- Mörtenböck, P., & Mooshammer, H. (2021). Platform Urbanism and Its Discontents. Nai010 Publishers.
- Srnicek, N. (2016). Platform Capitalism. Polity Press.
- Terranova, T. (2004). Network Culture: Politics for the Information Age. Pluto Press.

EDRA GJINOLLI

FOODORA Backpack

fig. 1 Foodora Backpack, photo: Edra Gjinolli, 2024

fig. 2 „the logistics",
photo: Edra Gjinolli, 2024

fig. 3 Interfering the pedestrian zone,
photo: Edra Gjinolli, 2024

fig. 4 The neon-pink bag in Mariahilferstraße,
photo: Edra Gjinolli, 2024

fig. 5 Through pedestrian zone,
photo: Edra Gjinolli, 2024

fig. 6 „working space",
photo: Edra Gjinolli, 2024

fig. 7 „the logistics", photo: Edra Gjinolli, 2024

fig. 8 Foodora backpack on motion,
photo: Edra Gjinolli, 2024

fig. 9 Relying on bicycles,
photo: Edra Gjinolli, 2024

fig. 10 Algorithm as an Urban Navigation, photo: Edra Gjinolli, 2024

fig. 11 Gigging for income,
photo: Edra Gjinolli, 2024

fig. 12 The intense workload of the
backpack, photo: Edra Gjinolli, 2024

fig. 13 Absorbing the risk of the traffic, photo: Edra Gjinolli, 2024

fig. 14 Fragmented urban space,
photo: Edra Gjinolli, 2024

fig. 15 Street as a delivery route,
photo: Edra Gjinolli, 2024

Free-Stuff-Boxes

Free-Stuff-Boxes are open containers typically placed on the roadside in urban areas, where people leave items, they want to give away. They are usually simple cardboard boxes or other containers found inside a household and put together by private individuals. These containers are often improvised, with handwritten or glued-on labels that clearly indicate the contents are intended to be taken away for free.

This elaboration refers to the phenomenon of the German „Zu-Verschenken-Kisten".
Since the term was translated into English, I will use the informal term „Free-Stuff-Boxes".
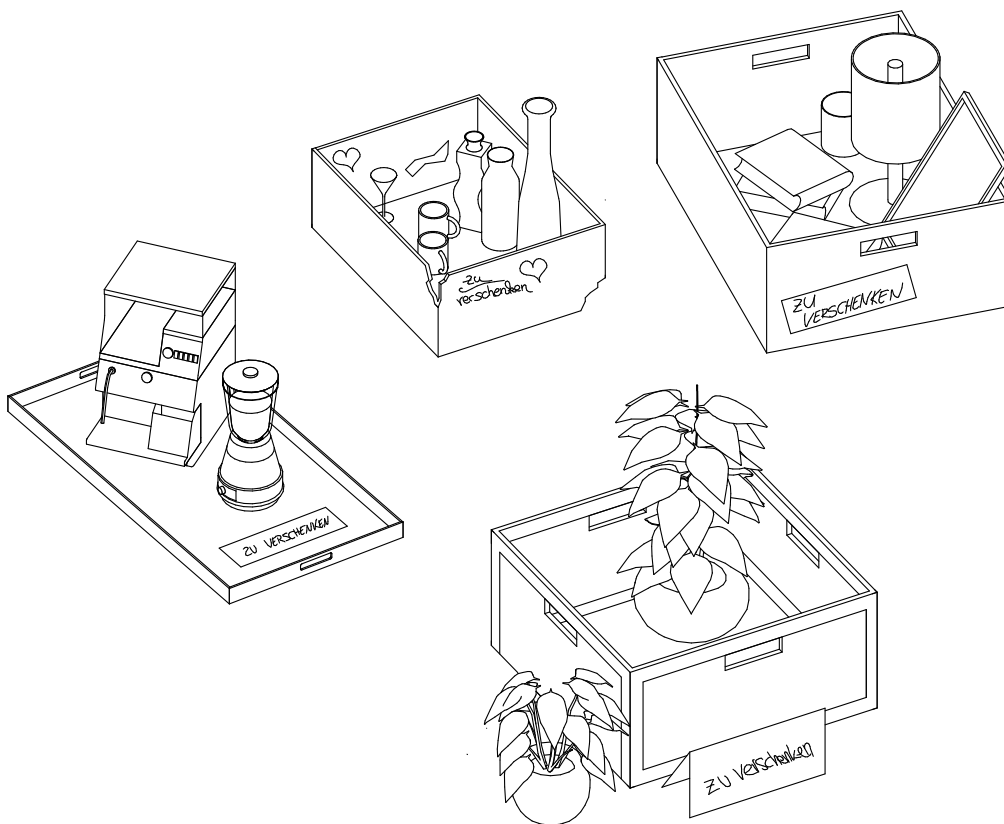
Free-Stuff-Boxes

Free-Stuff-Boxes represent an informal, spontaneous, and low-threshold method of redistributing items that are no longer needed but are still usable. The contents of the boxes vary a lot and often include a mix of different items such as clothing, books, household items, and toys. Mostly objects that appear to have no immediate connection at first glance. This heterogeneity reflects the randomness of the selection process, as the boxes generally consist of items that are no longer needed and spontaneously collected within a household.
Typically placed directly in front of or next to front doors, on pavements, at entrances, or in front gardens, give-away boxes are highly visible and easily accessible to pedestrians. In some cases, the boxes are also placed inside the hallway and are only accessible to the immediate neighbours. This semi-public placement allows people to offer or take items with minimal effort, emphasizing the low-threshold and unbureaucratic nature of the practice. These boxes are often found in creative, alternative, and student neighborhoods, as well as in suburban and middle-income communities, particularly in urban areas where anonymity and individualism often dominate. In these areas they address various challenges of urban living, including environmental, social, and economic issues.

In this essay, I will examine the recurring pattern of Free-Stuff-Boxes in urban centers on the street, using the framework outlined in the publication A Pattern Language (1977) by Christopher Alexander, Murray Silverstein, and Sara Ishikawa. The authors define patterns as repeatable solutions to recurring problems in specific contexts. Patterns serve as building blocks for creating functional, aesthetic, and harmonious designs, particularly in architecture and urban planning. They have universal qualities that address human needs, behaviors, and perceptions, functioning both as design tools and as guidelines for creating more livable, human-centric environments.
The focus of this analysis is on the urban challenges that give rise to this pattern and the solutions it proposes. I will then critically assess the pattern using texts from the "Visual Cultures" course in the winter semester of 2024/25 and evaluate its effectiveness in addressing these challenges.

Problem: Rising challenges within the city

Modern cities face numerous challenges, including resource waste and inefficient resource use, which are among the most pressing issues today. Rapid urban population growth, rising consumption, and a widespread throwaway mentality strain the environment and natural resources. The production, consumption, and disposal of goods, often without regard for long-term effects, generate increasing amounts of waste.
This trend has significant environmental consequences, exacerbates social inequalities, and adds economic burdens. As sustainability and resource conservation become increasingly important, new solutions must be found to address resource waste and promote a circular economy.
Another pressing issue in urban areas is the generation of waste from items that are still functional but no longer in use. In industrialized nations, consumer-driven societies often discard items after a relatively short time, even though they could still be reused or recycled. Urban environments, with high consumption rates, dense populations, and fast-paced lifestyles, amplify this problem. Research has shown that resource wastage significantly contributes to elevated CO_2 emissions, given the environmental impact of producing new items and disposing of waste.
Additionally, another pressing problem is that in many urban contexts, the cost of living is rising continuously. This has a particularly detrimental effect on people with low incomes or those in precarious employment. Access to necessary consumer goods such as furniture, clothing, household appliances, or even food is becoming increasingly difficult, especially for families and individuals like students with a limited budget.
In many cases, these people are forced to resort to cheap or inferior products that wear out quickly. Furthermore, individuals may also be more dependent on second-hand or social organisations to acquire goods at low cost.
Urban anonymity and social isolation also present significant challenges. In urban areas, which are often characterised by high population density, fast-paced rhythms of life, and a multitude of social and cultural differences, people can become alienated from one another. This anonymity and social isolation have a negative impact on the sense of community and can affect the well-being of the city inhabitants. Older individuals, single residents, and socially disadvantaged groups are particularly vulnerable to these effects, experiencing less support from their social environments. The anonymity of urban environments means that people are less inclined to socialise or actively contribute to shaping their surroundings. This not only promotes social isolation but also a sense of alienation from one's own city and social community. This can also be recognised within the cityscape. Many public spaces in cities are perceived as empty or forgotten, and many places do not really serve a specific function or have little social life. Roadsides, unused corners, or car parks are often only perceived as transit zones, which hardly offer any space for creative or communal use.
In addition to that public space is also becoming increasingly commercialised and regulated. As a result of this trend, many public spaces are becoming less accessible and usable for the public. What used to serve as a common space for community activities, exchange, and informal social interaction is now often dominated by commercial interests and privatised initiatives. Public space is increasingly being divided into commercially usable zones that no longer promote social exchange and self-organisation among residents but primarily serve economic interests.

All of these problems make life considerably more difficult for residents in cities and larger communities. The need to respond to these new challenges is obvious, as they impact not only the quality of life but also the sustainability and durability of urban living.

Analysis: Sharing as a future-proof community concept

The practice of sharing and redistributing objects, goods and services has far-reaching cultural roots that vary from society to society.
In the past, the practice of sharing surplus resources, especially within smaller communities, has been a very important part of exchange that strengthens social bonds and prioritises mutual support between people. In an increasingly digitalised and globalised world. However, this practice is being pushed further and further into the background, creating a shortcoming, particularly in urban and digitally networked living environments.

The development of small, informal, and spontaneous exchanges in the street space through Free-Stuff-Boxes in some urban areas is therefore particularly interesting. These boxes are very common in western consumerist cultures and can be seen as a response to the excesses of prosperous societies. They offer a straightforward yet efficacious method of extending the lifespan of items while at the same time promoting resource conservation. Instead of throwing away or selling items that are no longer used, many people take the simple option of giving them away on their doorstep.
This is a much more sustainable and effective way of extending the life cycle of items and avoiding unnecessary waste. Their presence in urban spaces also serves to raise awareness of sustainability and resource management, providing daily reminders that waste can often be repurposed. Considering the challenges posed by climate change, resource scarcity, and waste disposal, these boxes play a small but noticeable role in promoting sustainable consumption habits and cultivating a community-oriented, resource-conscious mindset.
In view of the rising cost of living in urban areas, these boxes also offer a free opportunity to obtain needed items. This is particularly valuable for people who cannot afford or do not want to buy new items. Especially in disadvantaged neighbourhoods, the informal exchange of goods and services is an important survival strategy that enables people to use fewer resources more efficiently. In addition to the material benefits, it also offers social advantages by strengthening a sense of community and building trust within the neighbourhood.
A particular feature of Free-Stuff-Boxes is their improvised and often imperfect appearance. The authors, Stefano Harney and Fred Moten, speak in their book, All Incomplete (2021), of the aesthetics of the incomplete, which describes spaces and practices that do not aim for perfection or completeness but create a potential for connection through their openness. The improvised cardboard boxes and the randomly arranged objects, which do not really belong together inside the boxes, reflect this aesthetic. They enable a spontaneous form of interaction which is not oriented towards institutional or bureaucratic structures. The imperfection of this practice opens spaces for creativity and flexibility and emphasises the communal nature of the exchange. The quote "It is our incompleteness that inclines us toward one another" (Harney and Moten, 2021, p. 41) symbolises this process, which takes place when the box is set up. What is superfluous in one persons household can be a gift for another. Due to our own imperfections, we are dependent on mutual support. On this aspect, the

function of Free-Stuff-Boxes in urban spaces is also of a social nature, particularly in areas where feelings of anonymity and isolation are prevalent. The individually designed signs and boxes convey a message of community. The authors do not appear in person but still convey a sense of closeness and belonging to the viewer. Handmade elements are often particularly authentic as they convey a personal touch. They evoke feelings of care, generosity, and solidarity. This creates a silent connection between people who may never meet while the objects, boxes, and signs reflect a small piece of the authors personality. They invite the viewer to feel included and become part of this gesture of community and open space for a platform of exchange.

In All Incomplete (2021) the authors also emphasise the importance of collective practices that move outside the capitalist logic of exploitation and the need to create spaces for sharing, and community. In this sense, Free-Stuff-Boxes can be understood as an expression of the desire for such a space in which an alternative economy is possible. By defining the value of objects not just in monetary terms but in terms of their benefit to others, they question existing economic structures and open a speculative vision of a resource-conscious and community-oriented way of life. Through the idea of an alternative form of community, Free-Stuff-Boxes can be seen as speculative interventions in urban space, representing alternative visions to existing social and economic structures. The boxes encourage people to question the norms of urban life in the sense of how we live with and next to each other. They demonstrate that public space does not have to be used exclusively for functional or consumer-oriented purposes but can also serve as a platform for communal and non-commercial activities. By creating improvised spaces for exchange and encounters, they make visible the potential to shape urban space in a more community-oriented and sustainable way. As described in Speculation, Now (2015) by Vyjayanthi Rao, Prem Krishnamurthy, and Marina Zurkow, speculative thinking offers the possibility of designing alternative futures. In this view, Free-Stuff-Boxes are indicative of a lifestyle predicated on principles such as sharing, trust, and community. Consequently, they can be regarded as an alternative concept to the predominantly anonymous and consumptive way of life in urban areas. By redefining social dynamics in the neighbourhood, the boxes invite material resources to circulate not only through the market but also through informal and communal networks. The boxes also inspire speculative questions about the future and illustrate what transformative social alternatives could look like. The above-mentioned problem of unused public spaces can also be expanded through speculative thinking. Space is created for more possible uses and stimulates creative thought processes that could help to develop an alternative use of unused public spaces. In a possible future, for example, unused street corners, car parks, and empty buildings could be transformed into places of community. The appropriation of space using improvised cardboard boxes could be just the beginning of larger interventions.

In addition to the speculative thinking that the boxes offer, the diverse contents of the Free-Stuff-Boxes act as a communal resource within neighbourhoods, sustained by trust and voluntary cooperation. In this way the boxes can almost be seen as a self-organised community practice in neighbourhoods. The book Governing the Commons by Elinor Ostrom deals precisely in the chapter „Reflecting on the Commons" (p1-18, 1990) with these issues of the communal use of shared resources through self-organisation and cooperation. The authors research shows how communities can sustainably manage collective resources without state control or market-based mechanisms. A central aspect of Ostroms theory is the ability of communities to manage the use of resources through informal rules and norms. Such norms are often implicit but are nevertheless followed. In the case of Free-Stuff-Boxes, users unagreed understand that the boxes should only

be used for usable and functional items. These informal practices illustrate on a small level how local communities can organise themselves to ensure the sustainable use of resources on their own without the need for external control. The author emphasises the importance of trust and cooperation as the basis for the shared use of commons between people. Free-Stuff-Boxes promote precisely these social elements by being based on voluntary exchange and encouraging the neighbourhood to abide by unwritten rules. Ostrom also argues that decentralised and smaller systems are often more effective and sustainable than centralised approaches. The boxes put out on the street embody this decentralisation, as they can be spontaneously and easily integrated into different spatial and social contexts without complex organisation. Their simplicity and accessibility make them a model that fits seamlessly into everyday urban life and offers an effective alternative to centralised organisations within a city. The presence of giveaway boxes indicates a deficiency in urban infrastructure with regard to facilitating low-barrier resource exchange. While cities often offer organised systems such as second-hand shops or swap-events, these are typically bound by rules, costs, or formalities. In contrast, the use of Free-Stuff-Boxes offers a spontaneous and informal alternative, rooted in neighbourly interaction rather than institutional frameworks. This is particularly important in view of the increasing commercialisation of public space. Especially in a society whose coexistence is increasingly influenced by capitalist platforms, it is important to create opportunities for exchange in which economic interests play no role. It should also be mentioned that Free-Stuff-Boxes are not completely excluded from the institutional organisation. Placing such a box in a public space is sometimes perceived as littering and can be punished with a fine. This also leads to fewer or more boxes being placed in certain areas. Depending on social acceptance and the legal situation in the cities, districts and countries. Therefore give-away boxes are also somehow part of a citys institutional regulatory system, which can be circumvented by anonymity of the action and the imprecise regulations around it.

fig. 1 , photo: Give-away-box in aachen, katalin ax, 2024

fig. 2 , photo: Give-away-box in aachen, katalin ax, 2024

However, while Free-Stuff-Boxes may seem like a convenient way to help those in need by providing free items without any capitalist logic behind them, they do not address the root causes of pressing societal issues such as poverty, climate change, and social inequality. They may provide temporary relief, but cannot substitute for the comprehensive measures required to address these systemic problems. In addition to offering material goods, true progress demands a deep political and social commitment aimed at dismantling structural inequalities and promoting social justice. This goes far beyond the limited scope of a simple box. The reliance on such initiatives can inadvertently shift the focus from sustainable, long-term strategies to short-term, superficial solutions. This may ultimately undermine efforts to address the broader systemic issues that need to be dealt with within our society. While Free-Stuff-Boxes and other sharing systems may have their place in fostering local goodwill and promoting reuse, they should not be mistaken for a solution to the deeper problems that define modern urban life. The setting up of boxes only has a small impact on a small scale, but it can show us the importance of better use of resources in our everyday lives and make us realise how important it is to support each other while living together. For our future, which is directly threatened by climate change driven by our consumer society, among other things, it is essential that we explore alternative ways of living on both large and small scales. By increasingly embracing the principles of a circular economy, we can foster a culture of resourcefulness where materials are reused, shared, and kept in circulation for as long as possible. Not only does this reduce waste, but it also reduces the environmental impact of our consumption patterns. Sharing resources locally and encouraging collective use, for instance through community tools, car sharing, or libraries of things, can significantly reduce the need for new production and conserve natural resources. In addition to this, recycling resources locally and reducing dependence on global supply chains make urban areas more resilient to external shocks, such as supply shortages, while promoting long-term sustainable development. A society of sharing strengthens local communities by fostering trust, collaboration, and an easy access to resources. It also aligns with the broader goals of reducing emissions, minimizing waste, and promoting social inclusion.

fig. 3 , photo: Free-Stuff-Box in aachen, katalin ax, 2024

fig. 4 , photo: Free-Stuff-Box in aachen, katalin ax, 2024

Summary: The possibilities of Free-Stuff-Boxes

In conclusion, the practice of Free-Stuff-Boxes combines the functions of a platform for exchange with a critical perspective on institutional gaps in urban neighbourhoods. They create low-threshold, spontaneous opportunities for giving and taking, which also represent a form of temporary appropriation of urban space. By transforming public space on a small scale and making the infrastructure of the neighbourhood visible, they make an important contribution to promoting solidarity, sustainability, and community in urban contexts. These informal practices demonstrate the transformative potential of everyday actions and open new perspectives on the use and design of the city and neighbourhood. They are not only an expression of solidarity but also an example of alternative forms of economy and community that are characterised by their spontaneity, openness, and improvisation. These low-threshold and informal practices offer a concrete opportunity to realise the visions of community-oriented, non-hierarchical coexistence in everyday urban life. Overall Free-Stuff-Boxes are more thought-provoking than a final solution to the major problems of our communal life together. However, they are important for making the individual willingness to share resources visible in the cityscape and for revealing the potential for urban spaces to become flexible, accessible, and socially vibrant through community-driven efforts.

fig. 5 , photo: Free-Stuff-Box in aachen, katalin ax, 2024

fig. 6 , photo: Free-Stuff-Box in aachen, katalin ax, 2024

Context: A Pattern Language

Patterns such as gift boxes are not isolated phenomena but part of what Christopher Alexander, Murray Silverstein, and Sara Ishikawa describe in A Pattern Language as a cohesive language of connected elements. They refer to smaller patterns that are part of their solution and to larger patterns to which they belong. In relation to a Pattern Language, the Free-Stuff-Boxes could be seen as a small part of a larger network of patterns that focus on social interaction, community, and the use of public spaces. On a larger scale, this pattern includes places for the exchange of unwanted resources, such as bookshelves, donation cafes, or facilities such as Caritas, where people can easily drop off items that can later be given away for free or at low cost to people who need them. These places not only serve to exchange items but also promote a sense of community and a culture of giving and sharing in the neighbourhood.
This pattern could also be extended into the digital space. Platforms such as Willhaben or eBay Kleinanzeigen offer categories in which various items can be given away. This form of sharing corresponds to the low-effort concept of Free-Stuff-Boxes and offers an exchange without monetary benefit. With this form of exchange, there is no public visibility because it takes place in private space, since people usually collect the shared items directly from the people who offer them.

fig. 7 , photo: booksharing wien, katalin ax, 2025
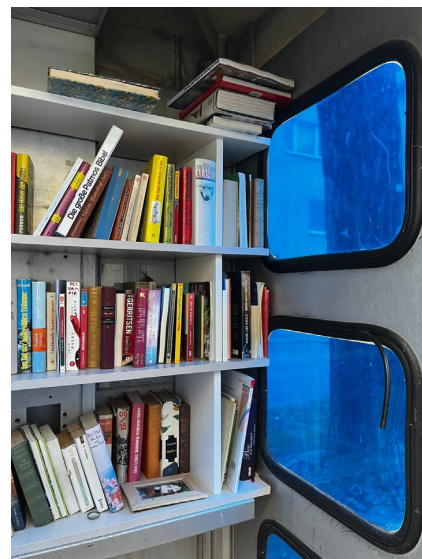
fig. 8 , photo: booksharing wien, katalin ax, 2025

Sources

Texts provided by the seminar "Visual cultures" WS 2024/25

Alexander, C., Ishikawa, S., & Silverstein, M. (1977). A pattern language: Towns, buildings, construction. Oxford University Press.

Harney, S. & Moten, F., 2021. All Incomplete. Minor Compositions.

Brown, A., Fisher, K., & Stoffel, M. (eds.), 2015. Speculation, Now. Duke University Press.

Ostrom, E., 1990. Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge University Press.

Botsman, R. & Rogers, R., 2010. What's mine is yours: The rise of collaborative consumption. HarperBusiness.

Williams, C.C. & Windebank, J., 2000. Helping each other out?: Community exchange in deprived neighbourhoods. Community Development Journal, 35(2), pp. 146-156.

Articles and Websites

WRAP, 2025. Resources. Available at: https://www.wrap.ngo/resources [Accessed 10 January 2025].

Arbeiterkammer Wien, 2025. Tagungsband Obsoleszenz. Available at: https://www.arbeiterkammer.at/infopool/wien/Tagungsband_Obsoleszenz.pdf?utm_source=chatgpt.com [Accessed 10 January 2025].

Armano, E., 2020. Recyclable City or Disposable City? A Century of Urban Waste in Naples. Metropolitics. Available at: https://metropolitics.org/Recyclable-City-or-Disposable-City-A-Century-of-Urban-Waste-in-Naples.html [Accessed 10 January 2025].

Earth.org, 2025. Throwaway Culture is Drowning Us in Waste. Available at: https://earth.org/throwaway-culture-is-drowning-us-in-waste/?utm_source=chatgpt.com [Accessed 10 January 2025].

Gupta, S., & Kumar, S., 2019. Sustainable waste management in the context of circular economy. ScienceDirect. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0956053X19305422 [Accessed 10 January 2025].

Schor, J.B., 2016. Debating the sharing economy. The Year in Review, 2016. Available at: https://www.som.yale.edu/faculty-research/research-centers/center-entrepreneurship/entrepreneurship/online-articles/debating-the-sharing-economy [Accessed 10 January 2025].

Caritas Wien (2025) Carla Wien. Available at: https://www.carla-wien.at/aktuell/detail/news/95135-achtung-eingeschraenkte-spendenabgabemoeglichkeit-im-carla-mittersteig/ (Accessed: 13 January 2025).

Recht Energisch (2022) 'Die Zu-Verschenken-Box: Wiederverwendung oder illegale Abfallentsorgung?', Recht Energisch. Available at: https://recht-energisch.de/2022/08/03/die-zu-verschenken-box-wiederverwendung-oder-illegale-abfallentsorgung/ (Accessed: 13 January 2025).

Houseplants

Representing a perfect duality between aesthetics and economy: collecting houseplants in various shapes is an act to bring moments of tranquility in hectic lifestyles.

Houseplants

As the gap between nature and city life grows due to technologies evolving and nature suffering from man-made climate change catastrophes, bringing nature back to our homes, working spaces and public life has become a crucial part of living, as well as an unconscious desire when creating spaces. It has become a pattern in design that roots back to oldest cultures and still manages to inspire and be innovative in each case. From centuries-old roof gardens to contemporary biophilic design, the integration of greenery into built environments offers a profound connection between people and nature. Acting as "perfectly decorative" objects, houseplants` power is often overlooked: they serve as a psychological relief, ecological health and a way of expressing oneself.
 Yet, in the following parts next to these positive aspects of houseplants, the questionable adaptation of these ideas into our economy is brought forward. Some flaws of this economy are: superficiality in advertising, neglecting local ecologies, green-washing and a new form of consumerism concealed behind authenticity.

Of course, new technologies are also part of this economy, but it would be unfair to criticize those as they bring knowledge and support learning about the infrastructure of dealing with houseplants. These technologies are for example apps for maintaining their health or search engines that plant a tree with each search. This analysis of houseplants positions this matter as more than decorative "cute" elements in our cities and frames them more as vital elements that foster ecological, social and mental harmony. This pattern addresses the universal human need for a connection to nature within indoor spaces. Indoor environments can often feel sterile, lifeless, and disconnected from the natural world, negatively impacting mental and emotional well-being. The found solution is to place houseplants in indoor spaces to bring elements of nature into daily life. These plants introduce natural beauty, improve air quality, and create a vibrant atmosphere. Houseplants promote relaxation, reduce stress, and add visual interest, softening the rigidity of man-made structures. They also provide seasonal variation and a sense of growth and life. But to get a better idea of this topic, it is crucial to go back in time and look at how plants made their way indoors in the west, to be exact in Europe (important to mention as the history and culture around plants and nature is based on different approaches in all areas in the world).

Before the 1600s it was rather uncommon to have plants inside ¬ — all the plants available were ones that grew outdoors: native plants, well-adapted to the particulars of local climate. With colonization starting in Africa, in the "Far-East", plants became interesting, "exotic" elements that would be transported to Europe. Which is followed by an attempt to try to keep the plants – that have been taken out of their natural habitat – alive in a totally different climate. And thus, began the industry around plants: seeing them as a new form of decoration, categorizing them, collecting and of course selling them. Penny Sparks, design historian, marks that the colonial idea of "controlling and taming" reflects itself in interior plant cultivation. Bringing a plant to completely different surrounding, taking care of it and making it learn to adapt to this new climate is often seen as an exciting challenge by gardeners nowadays: with enough sources, money (!) and time a plant can be disciplined. Over centuries ornamental plants have become

essential in middle- and upper middle- class. These first baby steps of having different kinds of plants inside your four walls led to whole architectural structures: conservatories and greenhouses. Those became examples of taste, elegance and a necessity to maintain a certain status of the rising middle class.

Therefore, indoor planting marks a new age for the image of domesticity and status, and although this class could afford such a luxury, many lacked the knowledge to furnish them, which led to conservatories and public gardens failing in maintaining the flourished plants. This would need knowledge from either experience (failing and trying again) or master of gardens from the origin countries of the plants.
We can go further in this analysis and try to find a link between the rise of indoor planting and the once again newly operated image of ideal womanhood. As conservatories belonged in the realm of domesticity, women should be the controllers of everything "beauty". Taking care of plants and gardening was in those times a woman's duty, who should be kept away from the "real matters of daily life" and concentrate on beautiful arrangements – the rather superficial matter of daily life. Arranging flowers, making floral wreaths, as well as table decorations, pressing and mounting ferns and flowers and so many more ways to spend time with plants fell into the task of a woman. All of which support a never-ending pursuit of domestic beauty and the social status that this beauty (therefore the woman of the house) should showcase. So, women of the middle-class were expected to control the aesthetics of domesticity whilst a woman from a lower class acted as her servant, who would do the dusting of. This hierarchy and role division functioned as a distraction from their generalized subjugation. Just as well as how conservatories and botanical gardens served as a distraction for the public from the wreckages and suffering under empiric reigns. (barbican and Sheffield greenhosues pictures)
Having made this small lookback on houseplants' history I want to come back to modern times and investigate the industry it has become in the 21st century and how maybe the way of operating this industry did not change all that much but it has been adjusted to current times e.g. the tools that are being used to serve this economy differ but not the idea behind it. At first houseplants seem harmless and their collection an enrichment of how we perceive a space. But just as history shows there is no doubt that we have economized and politicized nature as well, like Verónica Gaga also criticizes: everything we do is always already for the economy — serving Homo Economicus. Behind the image of sustainability, authenticity and connection to nature, the industry of houseplants does not differentiate all that much from some other product that lives through consumerism. The global supply chain for houseplants — spanning tropical nurseries, international shipping, and retail packaging — generates carbon emissions and depletes local ecosystems.

It is not a secret that access to greenery reduces stress, improves cognitive functions, and enhances overall well-being. Yet, in cities dominated by high-density housing and privatized green spaces, opportunities to interact with nature are insufficient. Houseplants, small and easily dealt with, offer a potential bridge to reconnect with the natural world within urban environments. Below this pattern will be differentiated between HOUSEplants (as in residential environments), OFFICEplants (as in working environments) and COMMERCEplants (as in commercial and public environments) and analyze how in each case this pattern works with the good and the bad.
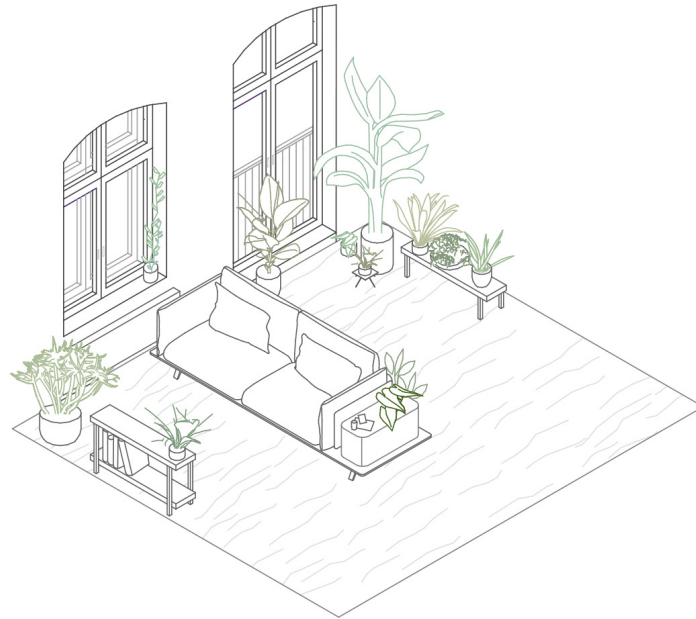
SIMGE PEHLIVAN

Houseplants

fig. 1 greenhouse atrium, sheffield, photo: simge pehlivan, 2023

fig. 2 conservatory barbican, london, photo: simge pehlivan, 2024

HOUSEplants

Can houseplants redeem our inner need for connecting with earth? As seen also in the pandemic, plants play a big part in many people's lives in making them feel less alone and more connecting, but also meanwhile distracting them from the sometimes-horrific realities they face. Plants hold up memories, plants give comfort and tranquility, and plants give occupation and purpose. But, as everything that exists is part of a capitalist system, houseplants stand for so much more than just nature and reconnecting. Because apartments in modern cities are designed for efficiency rather than comfort, the lack of natural light and ventilation limits the types of plants that can thrive. Additionally, the emphasis on minimalism in modern interior design often clashes with the organic, unpredictable growth patterns of plants, leading to their exclusion from design schemes. There is a duality in how houseplants are perceived in residential spaces. On the one hand they are treated as almost "children" of the home, taken care of ritually and carefully. Being the crucial element of making a house a home. On the other hand, houseplants play mostly an aesthetic role in luxe spaces. Rather than enhancing the natural growth and shape of the plants, they are being adjusted to design trends. They can symbolize a certain lifestyle and taste, which is done so very often in design, but the idea of dragging nature into this act is questionable and makes plants (nature) a product of the economy. As mentioned earlier, the thoughts do not change but the tools do. Socioeconomic disparities influence access to houseplants. Opulent households can afford "exotic", expensive species, custom planters and professional care. Whilst lower-income households face barriers to acquiring and maintaining greenery. Even though plants have become cheaper than in the past and are more accessible than ever, they are still a luxe item for many households. This inequality leaves a perception of houseplants as markers of privilege rather than accessible design elements for well-being.

Houseplants

fig. 3 houseplant 1, vienna, photo: clara schmiedehausen, 2023

fig. 4 houseplants 2, vienna, photo: simge pehlivan, 2023

Houseplants

fig. 5 houseplants 3, vienna, photo: simge pehlivan, 2024

fig. 6 houseplants 4, vienna, photo: simge pehlivan, 2024

fig. 7 houseplants 5 (dying), vienna, photo: simge pehlivan, 2023

fig. 8 houseplants 6, vienna, photo: sinem firat, 2024
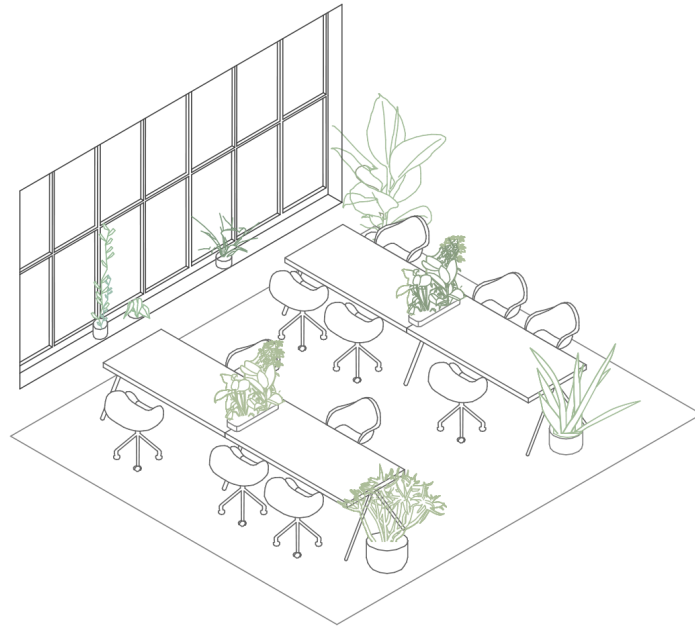
OFFICEplants

Designing with plants for offices has become a norm. While we see renderings, pictures of green walls, big potted plants and a big outside garden in almost every new office plan it is questionable if this biophilic design really works in this idealistic way or if houseplants in offices become symbolic of a larger issue: the tendency to address systemic workplace problems with superficial solutions, as well as green-washing people into a "fun, loving" work environment. Houseplants are introduced as a superficial remedy to sterile, monotonous settings. Open-plan offices and cubicles are often accessorized with potted plants in an attempt to humanize these spaces. While biophilic design suggests that plants can improve air quality and productivity, their benefits are frequently undermined by inadequate care and the prioritization of efficiency over well-being. Additionally, the placement of houseplants in offices often prioritizes visibility over functionality. Plants are positioned in communal areas for aesthetic effect, while personal workspaces remain barren. This approach limits the potential for individuals to form any connection with the greenery around them.

Houseplants

fig. 9 plants in circulation area, portugal, photo: clara schmiedehausen, 2023
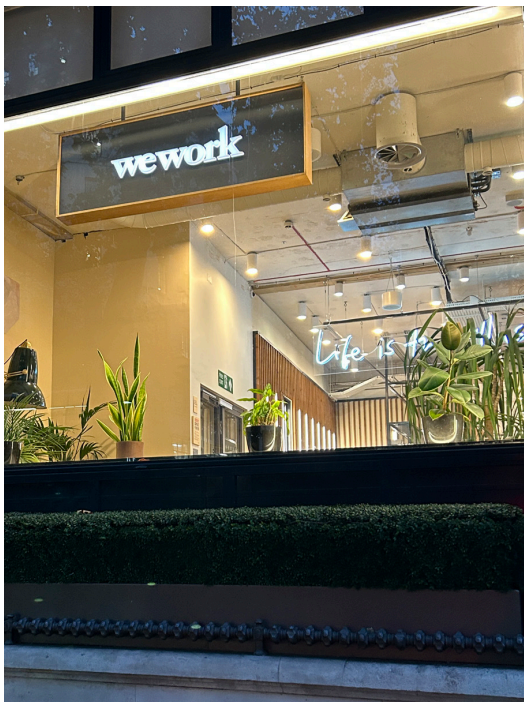
fig. 10 wework space, london, photo: simge pehlivan, 2024

Houseplants

fig. 11 behind a glass in an office, vienna, photo: simge pehlivan, 2024

fig. 12 entrance of a culture-centre, vienna, photo: simge pehlivan, 2024

COMMERCEplants
Houseplants are also ever-present in commercial spaces like cafés, boutiques, and plant shops, where their presence creates a curated atmosphere of warmth and authenticity. While they appear to signal sustainability and a connection to nature, their true purpose often aligns more closely with capitalist structures, serving as tools to attract customers and elevate brand aesthetics. Plant shops, in particular, have flourished through the demand on social media platforms. They control trends to promote not just plants, but a lifestyle tied to consumption. This raises questions about the balance between supporting local markets and participating in the commodification of nature, as the emphasis often shifts from taking care of plants to showcasing them as status symbols or Instagram-worthy elements. The focus on visual impact also leads to the neglect of native plant species, which are better suited to local climates and ecosystems. Instead, imported plants dominate the market, perpetuating unsustainable supply chains and reducing biodiversity. High-end retail environments, cafés, and luxury hotels increasingly incorporate indoor plants as part of their branding strategies, signaling a connection to nature while offering little in terms of actual ecological or social impact. These plants too, chosen for their visual appeal rather than ecological function, often fail to thrive due to poor environmental conditions and insufficient care.

Houseplants

fig. 13 café/garage entrance, copenhagen, photo: simge pehlivan, 2023

fig. 14 monstera-plant in a café, vienna, photo: simge pehlivan, 2024

fig. 15 plant shop, vienna, photo: clara schmiedehausen, 2024

fig. 16 garden centre camden, london, photo: simge pehlivan, 2024

fig. 17 garden centre camden, london, photo: simge pehlivan, 2024

fig. 18 garden centre camden, london, photo: simge pehlivan, 2024

Zimmerpflanzen im Büro bieten mehr als nur Ästhetik

Die erfolgreichsten Unternehmen der Welt integrieren Zimmerpflanzen, Wandgärten und Innenhofgestaltungen in das Design ihrer Büros.

fig. 19 wework website, 2025
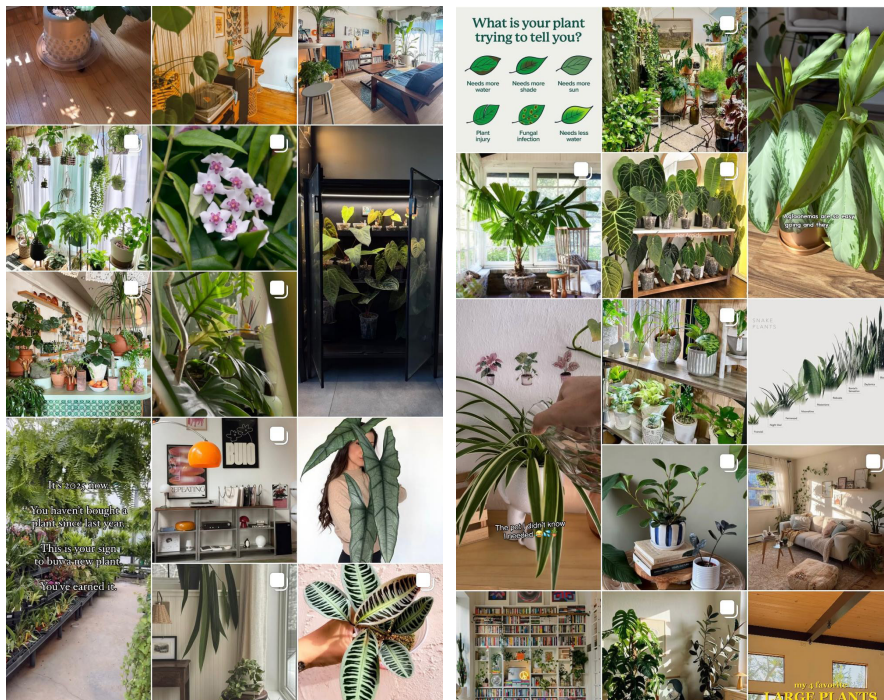
fig. 20 „plantfluencing", instagram screenshot, 2025

This leads to the general issue of houseplants being used in the media (f.e. Instagram) as a tool for making people achieve those very aspiring lifestyles. While plants are celebrated for their beauty and ability to create such „Instagram-worthy" spaces, this trend often reduces them to mere props in the pursuit of consumerism. Behind the lush greenery lies a capitalist cycle of constant buying, displaying, and discarding, where plants are again marketed as tools for status rather than living entities requiring care. This commodification of nature masks deeper environmental and ethical issues tied to mass production and the exploitation of labor in the global horticultural industry. Needless to say that these lifestyle promoters "plantfluencers" are not the fully the problem. The problem lies in the handling of the situation, where almost everything becomes commercialized. The good thing about supporting this lifestyle on platforms is that it fosters a sense of community and creativity, as individuals share tips, inspiration, and a collective passion for cultivating living spaces that feel vibrant and soothing. Since the knowledge of plant-care is not much spread, these platforms play a crucial part. The rise of plant-care apps shows how caring for things, like plants, has become more structured and separated in today's busy city life. These platforms offer tools for identifying plant species, scheduling watering, and diagnosing health issues, supposedly empowering users to maintain a thriving collection of houseplants. However, they also reflect a broader trend in which technology mediates and commodifies human interactions with nature. While these apps can foster knowledge and engagement, they risk reducing the act of caring for plants to a set of algorithmic tasks, detaching users from the sensory and relational aspects of plantcare. These apps offer a simple way to keep plants healthy, as their health (or unhealth) can cause problems for humans. For example overwatering can cause mold growth, that can trigger allergies or respiratory issues. Some plants, if neglected, can become breeding for pests, such as fungus, which can even spread to other areas of the home. So proper care and plant selection are key to balancing the benefits of indoor greenery with potential health risks.

This pattern, as written, stretches over many different areas that cover health, lifestyle, media, economy and architecture. Though the question arises: what really makes houseplants a pattern? In which context is it a pattern of our modern life?
We strive for authenticity. We have this internalized desire of being human – this non-industrialized, not-fully-surrounded-by-technology human and even though houseplants serve rather an economy than us humans, it is easier to believe that our plants on our desks are for us and not against us, because we can feel their liveliness. They are a pattern of intimacy and detail, that ultimately deals with physical touch and senses of humans. They create micro-environments where individuals can interact with nature directly. This interaction is not purely visual; it is tactile, aromatic, and deeply relational. Cultivating a plant requires attention and care, which fosters a sense of responsibility and intimacy often absent in other aspects of modern life. Which is also why as emntioned above some see plants as their children. Houseplants thus serve as a remedy to the sterility and disconnection that often define urban interiors, offering a moment of tranquility and reflection in a fast-paced world.
They symbolize a yearning for nature in urban and industrialized settings, which then makes houseplants a pattern or weapon against the individual self and for the economy – turning them into marketable goods that sell a status and lifestyle. Economically, the houseplant industry mirrors larger structures of capitalism, where trends driven by social media promote cycles of consumption that often overlook the environmental costs of globalized plant trade. Houseplants symbolize the privatization of care, where tasks like cultivating beauty and maintaining life are removed from collective or shared spaces

(e.g., gardens or public parks) and are placed into individual homes. This shift reflects broader political and economic trends toward privatization and the compartmentalization of labor within the household.

Again, history does not change, it transforms into another form: something as simple as a houseplant reflects on defined gender roles like it was before our "modern times" and still is. There is a recurring theme of women being tasked with beautifying spaces and doing care-work. Houseplants tend to fit neatly into this traditional role. The act of tending to houseplants – watering, pruning, arranging – mirrors these gendered labor patterns, presenting them as natural or even fulfilling, rather than socially constructed. Can we break this pattern?

Houseplants are not mere decorations; they are vital participants in the ongoing dialogue between human habitation, the natural world and cities. They are capitalist weapons, that hide between their aethetics, so this truth becomes less visible but through thoughtful integration, education, and technology, this pattern can foster real authentic spaces, that work localy and communally. To fully realize the potential, we must embrace houseplants as living, dynamic elements of a regenerative design principle, without getting caught up in a system of spending more money and following trends. A way of reclaiming the authenticity of houseplants and the design around them would be to firstly be aware of the surrounding space where houseplants must be able to evolve around and not only stand as static décor elements. This requires a thoughtful design process, such as ensuring access to natural light, using materials that support plant health, and creating spaces where people can engage meaningfully with greenery. By doing so, the houseplant pattern can fulfill its deeper potential as a living, regenerative force.

Christoph Alexander's patterns overlap and reinforce one another. In the case of houseplants, this pattern can act as the core link between multiple design goals: sustainability, mental and physical well-being and aesthetics. Integrating this to a larger pattern like "courtyards" or "community gardens" can create a basis for indoor and outdoor spaces can interact fluidly. This combining shifts houseplants from a decorative afterthought design element to a vital component of planning.

Houseplants

fig. 21 garden shop outside, thailand, photo: clara schmiedehausen, 2023

fig. 22 collection of bonsai trees in pots, london, photo: simge pehlivan, 2024

fig. 23 flowerstand in a church, vienna, photo: simge pehlivan, 2023

fig. 24 tree at angewandte-mensa, vienna, photo: simge pehlivan, 2022

fig. 25 entrance to a home, vienna, photo: simge pehlivan, 2023

fig. 26 plants (thriving) in abondenement, sheffield, photo: simge pehlivan, 2024

Bibliography

Sparke, Penny, Nature Inside: Plants and Flowers in the Modern Interior, Yale University Press, 2021

https://www.nachi.org/plants-indoor-air-quality/(04.01.2025)
https://thesociologicalreview.org/magazine/september/2021/new-solidarities/living-with-house-plants/ (02.01.25)
https://www.architectural-review.com/archive/a-short-history-of-the-origins-of-the-taste-for-indoor-plants (02.01.2025)
https://www.wework.com/de-DE/ideas/research-insights/benefits-of-indoor-plants-in-the-office (12.01.2025)
https://annehelen.substack.com/p/the-age-of-houseplants (03.01.2025)
https://www.sciencedirect.com/science/article/pii/S0360132322003882 (12.01.2025)

ATILLA BOYAN

Vertical Garden Complexes

This essay will try to show, from the perspective of their ecological, social and economic implications, what VGCs mean for platform cities. It will expose their challenges and opportunities, and sketch possible ways forward to truly sustainable and inclusive urban futures.

Vertical Garden Complexes

In the evolving landscape of urban environments, the concept of platform cities has emerged as a paradigm shift, intertwining technology, economy, and governance. Within this context, the notion of „Vertical Garden Complexes" (VGCs) offers a compelling case study. These architectural structures, celebrated for their potential to integrate greenery into dense urban settings, represent more than mere aesthetic innovations. They embody the interplay between ecological aspirations, capitalist dynamics, and the governance strategies of modern platform cities.
Platform cities operate as socio-technical systems where digital infrastructures mediate urban experiences, facilitating data-driven governance and economic optimization. Vertical Garden Complexes, as a subset of this paradigm, encapsulate the tensions between environmental idealism and their commodification within platform capitalism. While VGCs promise sustainability and enhanced urban living, they also raise questions about equity, accessibility, and their role as tools of neoliberal governance.

This essay explores the Vertical Garden Complexes as a specific pattern within the platform city model, focusing on three key dimensions: the problems inherent in their conception and implementation, the broader socio-political and economic dynamics shaping their existence, and the potential solutions to align their design and function with truly sustainable and inclusive urban futures. By drawing on theoretical frameworks from critical thinkers such as Luc Boltanski, Michel Foucault, Giorgio Agamben, Jathan Sadowski, and Nick Srnicek, this examination seeks to unpack the complexities of VGCs in the platform city context.

The following sections will analyze the Vertical Garden Complexes through the lens of the „new spirit of capitalism," the economic rationality of the „homo oeconomicus," the theological underpinnings of governance, and the pervasive influence of data capitalism. The aim is to critically assess their dual role as both a solution to urban ecological challenges and a product of neoliberal urbanism, ultimately proposing pathways for reconciling these dualities.

Problem
Vertical Garden Complexes are frequently presented as an innovative solution to the ecological and spatial challenges of contemporary cities. However, their implementation within the platform city framework reveals significant issues that undermine their purported benefits. These problems stem from the intersection of environmental objectives, economic imperatives, and governance models that prioritize profit and control over inclusivity and genuine sustainability.

1. Commodification of Green Spaces

As Luc Boltanski and Ève Chiapello outline in *The New Spirit of Capitalism*, capitalism continually reconfigures itself by appropriating critiques and turning them into market opportunities. Vertical Garden Complexes epitomize this dynamic by commodifying ecological sustainability. Marketed as symbols of urban renewal and environmental stewardship, these complexes often become exclusive spaces accessible only to the affluent, thereby exacerbating socio-economic inequalities. Instead of serving the broader urban populace, they function as luxury commodities that reinforce the commodification of nature.

Furthermore, the commodification of these spaces diminishes their public utility. Green spaces, which traditionally serve as communal resources for recreation, mental well-being, and environmental mitigation, are reimagined as commodities to be bought and sold. This shift transforms the urban green landscape into a privilege rather than a right, further entrenching social divides and perpetuating inequality in platform cities. Additionally, the economic burden placed on developers to create these spaces often results in reduced emphasis on public accessibility, leading to exclusivity and social fragmentation.

2. The Economic Rationality of Urban Design

Michel Foucault's concept of the „homo oeconomicus" highlights the pervasive influence of economic rationality in shaping human behavior and societal structures. In the context of Vertical Garden Complexes, this economic logic manifests in the prioritization of profitability over ecological and social objectives. Developers and city planners may design these structures to maximize real estate value and attract high-income residents, rather than addressing broader urban challenges such as affordable housing or community green spaces. This approach limits the potential of VGCs to serve as equitable solutions.

The economic rationality driving VGCs often results in a trade-off between ecological and financial goals. Developers focus on achieving short-term profitability through high-end designs and exclusive amenities, sidelining the potential for long-term environmental impact. This approach not only compromises the sustainability of VGCs but also undermines their capacity to contribute meaningfully to the ecological health of urban areas. Moreover, this logic often excludes vulnerable populations from benefitting from such developments, exacerbating systemic urban inequities.

3. Governance and Control Mechanisms

Giorgio Agamben's exploration of governance in *The Kingdom and the Glory* provides a framework for understanding how Vertical Garden Complexes operate as tools of neoliberal governance. These complexes often embody a form of „soft power," subtly regulating urban life through their design and management. Access to these spaces may be restricted, surveilled, or conditioned by economic status, turning them into instruments of control rather than public benefit. This raises critical questions about who these spaces are truly designed for and how they reinforce existing power structures.Moreover, the governance of VGCs exemplifies the intersection of biopolitics and urban planning. By embedding surveillance technologies and restrictive policies within these spaces, city authorities and private developers consolidate control over urban populations. This dynamic mirrors broader trends in platform cities, where governance is increasingly mediated through data-driven systems and market logics. Such governance models also introduce challenges of accountability, as the blending of public and private interests obscures responsibility for social outcomes.

4. Environmental Challenges and Greenwashing

While Vertical Garden Complexes are celebrated for their ecological potential, their actual environmental impact is often less than advertised. Jathan Sadowski's critique in *Too Smart* highlights how technological and architectural innovations can be co-opted to serve corporate interests under the guise of sustainability. Many VGCs prioritize aesthetic greenery over functional ecological benefits, failing to significantly mitigate urban heat islands or improve air quality. This „greenwashing" undermines their credibility as a solution to urban ecological crises.

The prevalence of greenwashing within VGCs not only deceives the public but also diverts attention from more impactful ecological interventions. By focusing on superficial measures such as vertical gardens, cities may neglect comprehensive strategies for climate resilience, such as improving public transportation, retrofitting existing buildings for energy efficiency, and preserving natural ecosystems. Moreover, the reliance on imported materials and non-native plants in these projects often exacerbates their environmental footprint, challenging the authenticity of their „green" image.

5. Data Capitalism and Surveillance

Nick Srnicek's analysis in *Platform Capitalism* underscores the role of data in contemporary urban governance. Vertical Garden Complexes, as part of smart city initiatives, often integrate digital technologies for monitoring and maintenance. While this enhances efficiency, it also raises concerns about data collection and surveillance. Residents and visitors may unwittingly become sources of data extraction, contributing to the growing commodification of personal information within the platform city framework. The integration of data-driven systems within VGCs raises pressing ethical and legal questions. Who owns the data collected from these spaces? How is it used, and who benefits from its commodification? Addressing these questions is crucial to ensuring that VGCs serve public interests rather than perpetuating exploitative practices. Furthermore, the potential misuse of such data for targeted marketing or behavioral prediction underscores the risks associated with embedding surveillance into urban infrastructure.

Analysis
The Vertical Garden Complexes (VGCs) represent a unique intersection of urban architecture, environmental goals, and platform-based governance. To understand their broader implications, it is essential to examine the socio-economic, technological, and governance dynamics that define their existence. This analysis seeks to unravel how these structures function as both products and perpetuators of the platform city model.

1. Neoliberal Urbanism and the „New Spirit of Capitalism"
Drawing on Boltanski and Chiapello's *The New Spirit of Capitalism*, VGCs can be viewed as emblematic of neoliberal urbanism, where ecological ideals are appropriated to sustain market dynamics. These complexes are not merely architectural innovations but are deeply embedded in the logic of capital accumulation. By transforming green spaces into exclusive commodities, VGCs reinforce socio-economic disparities and commodify ecological values. The branding of these structures as „sustainable" serves to obscure their alignment with profit-driven motives, illustrating how capitalism adapts to critiques by incorporating them into its framework.
Furthermore, the adaptation of ecological critiques into market strategies reflects a broader trend within platform cities. By framing VGCs as symbols of progress and innovation, developers and city authorities obscure the inequalities they perpetuate, shifting public attention away from systemic issues and towards superficial markers of sustainability. This tactic not only limits public critique but also reinforces the dominance of market-oriented solutions in urban planning.

2. The Role of Economic Rationality
Foucault's concept of „homo oeconomicus" sheds light on how VGCs align with the economic rationality underpinning platform cities. These structures prioritize economic efficiency, often at the expense of inclusivity. For instance, their development frequently targets high-income demographics, marginalizing lower-income communities that stand to benefit most from green infrastructure. The integration of these complexes into the urban fabric reflects a broader shift towards market-oriented governance, where public good is subordinate to economic imperatives.
By privileging economic considerations over social equity, the implementation of VGCs exemplifies the challenges of balancing profit motives with public interests.
This approach not only limits access to green spaces but also perpetuates cycles of exclusion that undermine the democratic potential of urban development.

3. Governance and Biopolitics
Agamben's insights in *The Kingdom and the Glory* highlight the governance strategies that underlie VGCs. These complexes often operate as tools of biopolitical control, regulating urban life through their spatial and managerial configurations. For example, access to these spaces may be mediated by surveillance systems, membership fees, or other restrictive measures, thereby reinforcing power asymmetries. This mode of governance aligns with the broader platform city model, where control is exerted not through overt coercion but through subtle, systemic mechanisms.
Moreover, the intersection of governance and technology within VGCs raises critical questions about accountability and oversight. As private developers assume greater roles in urban planning, the boundaries between public and private governance blur, complicating efforts to ensure transparency and equitable access.

4. Digital Integration and Data Economies

Srnicek's *Platform Capitalism* emphasizes the centrality of data in the contemporary economy. VGCs, as part of smart city ecosystems, often incorporate digital technologies for monitoring environmental conditions, optimizing energy use, and enhancing maintenance. While these technologies offer practical benefits, they also contribute to the datafication of urban life. Residents and visitors become data sources, fueling platform economies and raising ethical concerns about privacy and consent. This dynamic underscores the dual role of VGCs as both technological solutions and instruments of data capitalism.

The reliance on digital systems within VGCs highlights broader trends in platform cities, where data extraction becomes a key driver of economic activity. While this approach enhances operational efficiency, it also risks prioritizing technological solutions over human-centered design, marginalizing community voices in decision-making processes.

5. The Ecological Paradox

Despite their promise of sustainability, VGCs often fall short of delivering meaningful ecological benefits. As Sadowski argues in *Too Smart*, technological solutions are frequently co-opted to serve corporate interests rather than genuine ecological goals. In the case of VGCs, the emphasis on visual appeal often overrides functional considerations, such as biodiversity enhancement or urban heat reduction.

This paradox highlights the limitations of relying on market-driven approaches to address environmental challenges. Moreover, the ecological limitations of VGCs underscore the need for a more holistic approach to urban sustainability. By integrating these complexes into broader strategies for ecological resilience, cities can maximize their potential benefits while addressing the systemic issues that undermine their effectiveness.

Solution

To address the challenges posed by Vertical Garden Complexes (VGCs) within the platform city model, it is imperative to adopt a multi-faceted approach that prioritizes inclusivity, sustainability, and ethical governance. The following solutions propose pathways for reconciling the ecological and socio-economic contradictions inherent in VGCs.

1. Reclaiming Green Spaces for Public Use

To counteract the commodification of green spaces, VGCs must be designed and managed as public assets rather than exclusive commodities. Policies should mandate that a significant proportion of these complexes serve the wider community, offering accessible green spaces, community gardens, and educational programs. By prioritizing public use over profitability, cities can ensure that the benefits of VGCs are equitably distributed. Public investment in these spaces can also play a pivotal role in ensuring their long-term accessibility. By allocating municipal funds towards the development and maintenance of VGCs, cities can reduce their dependence on private developers, fostering a more inclusive approach to urban green infrastructure.

2. Integrating Affordable Housing

VGCs should incorporate affordable housing units to ensure that their ecological and social benefits extend to diverse socio-economic groups. Urban planning regulations can incentivize developers to include mixed-income housing within these complexes. This integration not only addresses housing shortages but also fosters social cohesion and equity within urban environments.

Additionally, the inclusion of affordable housing within VGCs can serve as a model for integrating ecological and social objectives in urban development. By aligning these goals, cities can create spaces that reflect the needs of diverse populations, fostering a sense of shared ownership and community.

3. Enhancing Ecological Functionality

To overcome the limitations of greenwashing, VGCs must prioritize functional ecological benefits over aesthetic appeal. This includes designing for biodiversity, incorporating native plant species, and implementing systems to manage urban heat islands and air quality effectively. Collaboration with ecologists and sustainability experts can ensure that these complexes deliver tangible environmental benefits.

Furthermore, the adoption of adaptive management practices can enhance the ecological performance of VGCs. By monitoring and responding to changing environmental conditions, cities can optimize the functionality of these complexes, ensuring their long-term resilience.

4. Transparent and Inclusive Governance

Governance models for VGCs should prioritize transparency, accountability, and community participation. Mechanisms such as citizen advisory boards and participatory budgeting can empower local communities to influence the design and management of these complexes. Additionally, clear regulations should govern data collection and usage to protect privacy and prevent exploitation within the platform city framework.

The establishment of public-private partnerships can also facilitate more equitable governance models. By fostering collaboration between municipal authorities, developers, and community organizations, cities can ensure that VGCs reflect the diverse needs and priorities of their residents.

5. Leveraging Technology for Sustainability

While digital technologies are integral to the functionality of VGCs, their implementation should align with sustainability goals. Smart systems for water management, energy efficiency, and waste reduction can enhance the ecological performance of these complexes. However, it is crucial to balance technological integration with ethical considerations, ensuring that data collection is transparent, consensual, and aligned with public interest.

By integrating these technologies into broader sustainability strategies, cities can maximize the potential of VGCs while mitigating the risks associated with data-driven systems. This approach underscores the importance of aligning technological innovation with social and environmental priorities.

6. Promoting Collaborative Design Approaches
The development of VGCs should involve interdisciplinary collaboration among architects, urban planners, ecologists, sociologists, and community stakeholders. This collaborative approach can foster innovative solutions that address ecological, social, and economic challenges holistically. By prioritizing inclusive design processes, cities can create VGCs that reflect the needs and aspirations of their communities. These solutions highlight the potential for reimagining Vertical Garden Complexes as inclusive, sustainable, and equitable components of platform cities. By addressing the root causes of their contradictions and leveraging their strengths, VGCs can evolve into transformative urban features that align with the broader goals of ecological resilience and social justice.

7. A Vision for Future Urban Planning
Future cities must integrate Vertical Garden Complexes into a broader ecological strategy that prioritizes sustainability and resilience. These complexes should act as nodes within a green network of urban spaces, connecting parks, waterways, and natural reserves. By embedding VGCs into a comprehensive urban planning framework, cities can maximize their ecological benefits while fostering a culture of environmental stewardship.Moreover, the concept of „living buildings" could be explored further, where entire structures function as self-sustaining ecosystems. By integrating solar panels, rainwater harvesting systems, and community gardens, future VGCs could evolve beyond decorative facades into truly transformative urban solutions.

Vertical Garden Complexes

-Dumb Cities: Spatial Media, Urban Communication, and the .... (2025). retrieved undefined, from d-scholarship.pitt.edu/38387/13/Chandler%20ETD%202.pdf

-"Capitalism seems incapable of integrating the .... (2025). retrieved undefined, from www.philonomist.com

-Neoliberalism and Political Theologies of the Post-Secular. (2025). retrieved undefined, from www.mdpi.com/2077-1444/12/9/680

-Platform Capitalism Summary PDF | Nick Srnicek. (2025). retrieved undefined, from www.bookey.app/book/platform-capitalism

-Giorgio Agamben's The Kingdom and the Glory. (2025). retrieved undefined, from www.artforum.com

-Balancing Equity and Efficiency in the Allocation .... (2025). retrieved undefined, from pmc.ncbi.nlm.nih.gov/articles/PMC8536061/

-Towards ‚just resilience': leaving no one behind when .... (2025). retrieved undefined, from www.eea.europa.eu

-Building Sustainable Cities: Designing Urban Spaces for a .... (2025). retrieved undefined, from www.linkedin.com

-Inclusive governance: empowering communities and .... (2025). retrieved undefined, from www.frontiersin.org

-Roofscapes for Wildlife: Architectural Innovations to Boost .... (2025). retrieved undefined, from learn.constructive-voices.com

-Benefits of Parks in Your Community. (2025). retrieved undefined, from www.miracle-recreation.com

-Transforming our world: the 2030 Agenda for Sustainable .... (2025). retrieved undefined, from sdgs.un.org/2030agenda

ATILLA BOYAN

Vertical Garden Complexes

fig. 1 photo: Pedro Jose Aguilar Curbata, 2024
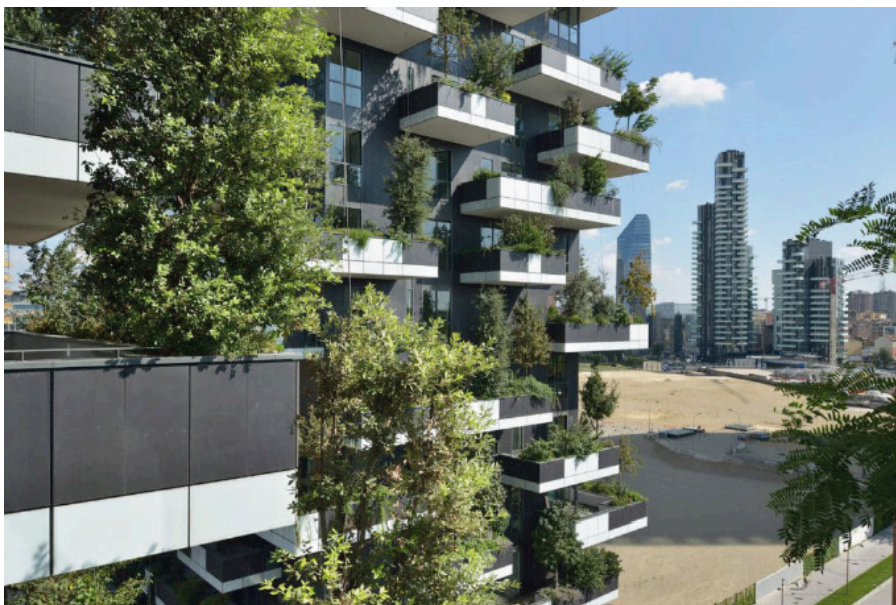
fig. 2 photo: © Stefano Boeri

CLARA SCHMIEDEHAUSEN

Pop-Up(s)

Pop-Up is originally a marketing term that is used in a wide variety of areas in the context of space and commercialization. First and foremost, it refers to quickly (or immediately) available, temporary space that can ideally be used adaptively and multifunctionally. This space fulfills the short-term consumer-wishes of the customer and responds to their real needs, or the needs desired by the occupant of the space. It can be described as a mixture of digital and physical space. It is therefore a temporarily real, locatable space that follows the logic and structure of our capitalist system. A distinction can be made between formal Pop-Up and informal Pop-Up.

This paper deals with the pattern of the commercial Pop-Up and in this context also with the modern, positive as well as negative effects of the design language in our capitalist society. The pattern is analyzed according to the system from the book *A Pattern Language* by Christopher Alexander, Murray Silverstein and Sara Ishikawa from 1977 and is thus fundamentally divided into the following three categories: The Problem, Analysis, Context and Solution of the pattern, while also addressing the texts covered during the semester. The pattern is viewed from a critical perspective and analyzed in the course of the semester topic. At the end, the paper also deals with the potential merging into a pattern in a larger, more urban context or scale. It examines which areas could be combined into a common, larger pattern. The paper explores various questions that have arisen in the context of the topic. What does Pop-Up mean and what issues are involved? What are the advantages and disadvantages? To what extent is the economic interest in the foreground? And to what extent does our digital-capitalist system play a role in this?

Problem: Short-term space and resource requirements

With the Covid-19 pandemic (and even before it), issues around space and time contingencies in a city were presented in a different light to a new reality. The conversion of experiences that could no longer take place in real life and had to be switched to online platforms brought many changes and, in this context, many new ideas and models for organizing encounters, trade and exchange. The idea of Pop-Ups is also interesting in the context of the pandemic because the balance between space and virtuality has shifted. The question of the extent to which temporary spaces are more practical, more future-oriented and better suited to different contexts than fixed, permanently available spaces is being explored. In our capitalist system, which also has to grow in the digital age, many things are becoming increasingly fast-moving. Pop-Ups therefore address the issue of temporary architecture and the growing demand for quick, short-term solutions to this problem. With more and more temporary space available, its organization increasingly takes place online and also shifts the relationship between economic factors such as costs, frequency and target audience. Temporary structures in general are becoming more and more important and are changing the way in which cities and spaces are conceived, presented and experienced.

Cities, urban environments and communities often face the challenge that some spaces are underutilized or in an unproductive transition phase. There is a great need for engineering short-term experiences that respond to changing consumer and cultural demands. New ideas need to be tested without having to commit to long-term infrastructure, long-

term leases or large investments. Due to the fast pace of platform-oriented capitalism, entrepreneurs need to react quickly and in a targeted manner to changes and new trends, which are generated primarily by the internet and social media channels. They therefore need quickly available spaces that are suitable for short-lived ideas or experiments. They need a place in real life to try out their trends and new products and to find out whether the market in this product section is suitable for a long-term investment in order to sub-sequently build a functioning business model.

Solution Approaches

Commercial Pop-Ups promote the vibrancy of urban environments by offering temporary, flexible and contextual solutions. They represent a modern pattern tailored to the needs of a consumerist, fast-paced and experimental society. Pop-Ups often use modular structures that are easy to assemble, dismantle or adapt and evoke attention through their novelty and transience. In this respect, it can be stated that a short-term response to the capitalist, rapidly changing system can certainly be that of a Pop-Up culture - it grows with it and adapts to the rapid changes. Pop-Up also addresses the problem of vacancy and conversion in cities in a creative way and contributes to minimizing these vacuums through its adaptability. Through creative approaches and the constant development of new ideas and business models, the exchange of people and industries is also promoted. They come into contact with each other easily and can thus develop virtual and real spaces for the exchange of ideas and goods. Community building is also promoted as temporary meeting places are created that can strengthen a local community. Pop-Up structures can
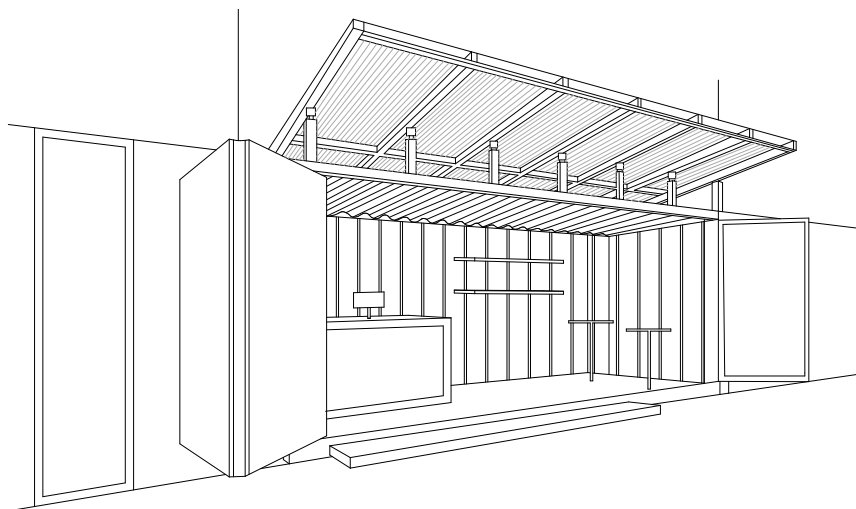
graphic , Pop-Up-shop in an existing building (or shop): clara schmiedehausen, 2024

be installed in small public spaces or in urban gaps that are otherwise used little or not at all. This activates the space and strengthens its function as a meeting place.

As already mentioned at the beginning of the paper, the pattern of Pop-Ups can be divided into categories and different forms of Pop-Ups can be generated. Formal and informal Pop-Ups can encompass a wide variety of areas. In this paper, the focus is on commercial Pop-Ups in the form of spatial structures in cities and the forms in which they occur. In the following, various areas are being analyzed and illustrated with examples.

Pop-Up is probably most widespread in the retail sector and describes an architectural business model with temporary stores and transient trade. Pop-Up retail is ideal for start-ups looking to increase brand awareness or to create a hype without necessarily committing to a long-term lease. They allow concept development and this facilitates commercial experimentation. Its point of sales are usually located in iconic and highly frequented locations in the city and are designed to offer visitors an "experience" through eye-catching colors, comfortable seating and danceable, modern music. The spaces are also used for private or semi-private events with refreshments served. In general, the spaces can be designed to feel more welcoming and contemporary than traditional brick-and-mortar retail.

Examples that I came across during my research include a "Kitsch Bitsch" store in Vienna's Neubaugasse, which temporarily rents an existing eyewear store and places itself there as a Pop-Up or a so-called in-sight-store that primarily sells clothes. A vintage 50s, 60s and 70s lamp store takes up annual residence in an ice cream store in the Westbahnstraße in the 7th district and uses the store's vacancy in winter for its sales. Viennese municipal buildings through Wiener Wohnen (Public Housing) also use Pop-Up to minimize vacancies in existing social housing complexes and to revitalize the otherwise abandoned and therefore unattractive ground floor zones. This program is subsidized by the City of Vienna and thus offers more cost-effective solutions compared to the commercial market for renting a store. The Volksgarten Pavilion on Vienna's Ringstrasse can also be rented for events during the winter months and thus offers a form of Pop-Up. In the area of retail, however, there are also Pop-Ups such as flea markets, which temporarily rent or occupy locations that can later be used for other purposes. One example would be the Wild im West flea market concept in Vienna. The church-owned second-hand store-chain Carla is also adapting to the Pop-Up trend and opened up a temporary branch in Mariahilferstraße in Vienna in April 2023.

Pop-Up is not just a term from the retail and fashion industry. It can also be used in other contexts, for example for new food trends. Restaurants that want to incorporate new trends and different cultures of countries into their cuisine use the concept of Pop-Ups to try out and test their concept. Mobile containers or temporary market stalls also offer street food concepts in upcoming city districts. There are plenty of examples that I came across during my research in Vienna. For example, the restaurant Shin in Kirchengasse in the 7th district, which is offering Taiwanese cuisine for a limited time. Or the vegan Cafè Moriz, which opened a Pop-Up to promote its business on Mariahilferstrasse but has now unfortunately closed down. The Öfferl bakery, which has several locations in Vienna, also had a location on Mariahilferstrasse, which was very popular and no longer exists. Cafè Berg on Berggasse in the 8th district runs a Pop-Up brunch every weekend in collaboration with various eateries.

fig. 6 & 7, Pop-Up Restaurant 1070 neubau, photos: clara schmiedehausen, 2024

There is also a trend in art and design that is increasingly developing in the direction of using Pop-Ups as a (marketing) concept and for developing new ideas for selling art as a product. One example of this is In Transition - Pop Up Events by Foto-Arsenal Wien: The photo exhibition will not open until spring 2025 and will have various Pop-Up locations in different museums and spaces in Vienna until then, which will be used to make the exhibitions and photographs available to the public. In the area of studios and workspaces for

fig. 1 & 2, Pop-Up in an ice cream shop, neubau, photos: clara schmiedehausen, 2024

fig. 3 & 4, fleemarket wild im west, photo: clara schmiedehausen, 2024

fig. 5, Pop-Up carla clothing store, mariahilferstrasse photo: clara schmiedehausen, 2024

artists, the system of Pop-Ups is also often used primarily to save costs and to communicate with other artists. This can happen via online platforms, but also via posters that are put up in the city and offer availability in studios or workspaces. One example I came across was in Zieglergasse in the 7th district. In winter 2024/25, the Ottakringer brewery in the 16th district is offering a Pop-Up called Perle in the form of a creative market. Exclusively female, upcoming artists will be selling handmade arts and crafts.

Cycle paths can also be established as Pop-Ups. Existing roads are narrowed, and cycle paths are made immediately available by erecting barriers and separating them from the road. The first example of this in Vienna was the Pop-Up cycle path in Praterstraße, which was created two days after the demand for more space for cyclists was stated. Luxury car brands use Pop-Ups for new products, among other things, to generate temporary attention in cities at prominent locations and thus to advertise.

fig. 8 & 9, Pop-Up cycle path, atelier as a Pop-Up, photos: clara schmiedehausen, 2024

Pop-Up can also be understood as a platform that has set itself the task of locating pubs, vacant buildings or stores in cities and renting them out on its website, thus making them more accessible. Subletting of existing stores is also often offered. A well-known platform for this is the website Go PopUp.com. Another example of a similar concept is the Wework. com platform, which offers and rents out co-working spaces all over the world. Social media and internet-based platforms generally play a major role in Pop-Ups - especially in the form of merch and trends that are spread through promotional videos (by influencers) and thus gain popularity and awareness.

Gehen Sie zu PopUp und lassen Sie Ihre Pop-up-Träume wahr werden
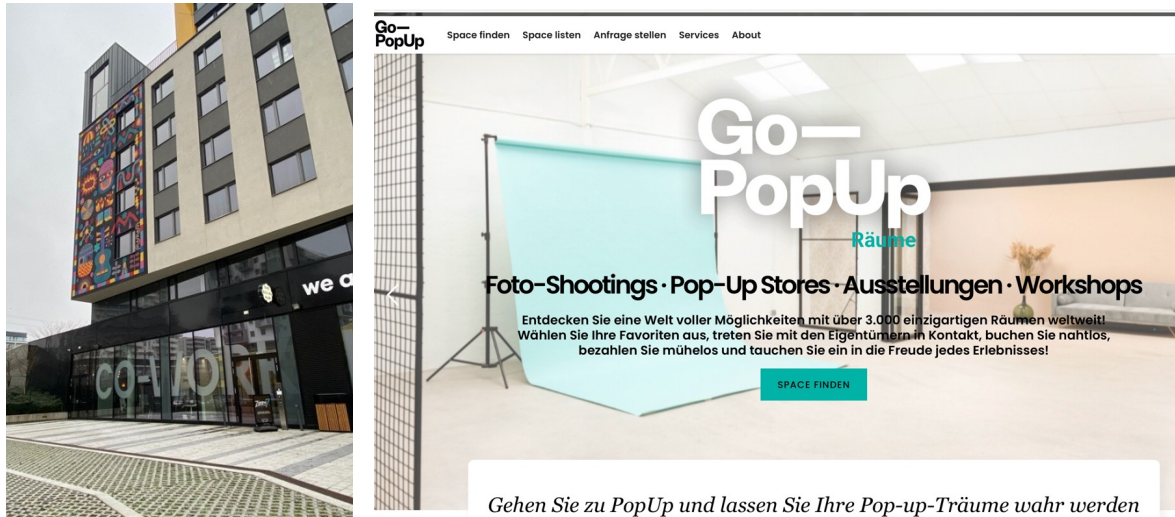
fig. 10 & 11, Co-Working, website Go-Pop-Up.com, photo: clara schmiedehausen, 2024

Micro-retail can be described as an informal Pop-Up. This category includes, for example, street vendors of various products such as magazines (e.g., Augustin), snacks and food stalls such as chestnut vendors or smaller, more informal market stalls of all kinds. Pop-Ups in the form of parcel stores in existing stores (usually smaller stores that have difficulty keeping their heads above water economically and have a fixed source of income from parcel services) are another form within the system and can therefore be described as informal. Informal Pop-Up is therefore part of an informal economy within our capitalist system. This raises questions about the legal basis - when does a business or an informal Pop-Up have to be registered as such? In what context does this have to happen? What is "informal" enough not to be seen as a business?
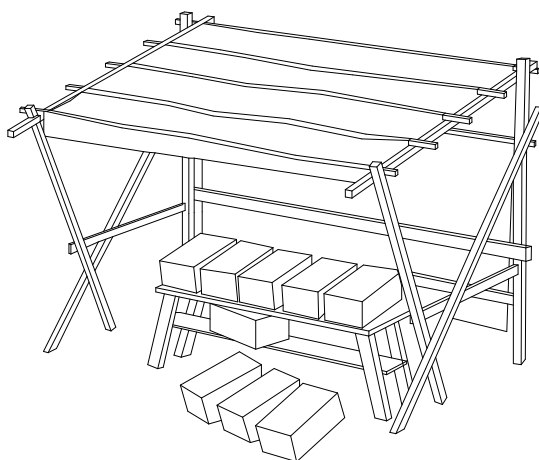
graphic 3 , market stand as informal Pop-Up: clara schmiedehausen, 2024

A more concrete solution for a (business) model, which in my opinion deals with the topic of Pop-Ups in a good and above all differentiated way, is a café in my hometown of Hohenems in Vorarlberg. The Visionscafé in Hohenems primarily serves as a place for exchange and as a discussion space for the residents of the town - it offers them a space to help to shape their own environment and at the same time it serves as a place to meet and as a leisure space in the form of a café. It constantly changes its location within the old town and always moves to wherever a building or store is vacant. As soon as a new life and a new use has been found for this location, the café moves again. In this respect, it can be seen as a Pop-Up that does not aim to make a commercial profit, but rather cleverly deals with social and political discourses in the context of the problems of vacancy and the use of space. It connects the dots of a constantly changing society and reacts skillfully to rapid changes. The focus is not on consumption, but on social and cultural exchange and the spatial opportunity to connect and communicate as a society.

fig. 12, Visionscafé Hohenems, photo: clara schmiedehausen, 2024

Analysis, context and criticism

Although the pattern of Pop-Ups brings with it many positive and innovative solutions and cleverly responds to current issues around the use of space and vacancy, its availability and commercialization, there are still many points that can be critically examined and questioned. While it partly represents a solution to the existing (commercial) problems of a rapidly changing, capitalist society and solves the issue of quickly available space in an overarching sense, this solution of Pop-Ups itself generates problems.

"The Theory of the Invisible Hand" by Adam Smith from his 1776 book *The Wealth of Nations* explains how individual interests can contribute to general prosperity in a free market economy. It forms the basis for the idea of capitalism and the belief in the self-regulation of the market. At the same time, modern economics show that markets do not always function perfectly and occasionally need to be supplemented by government intervention. Following Smith's thesis, one can also reflect on the pattern of Pop-Ups and their economic foundations. Pop-Up is characterized by the free-market-economy and is essentially a way of making a profit. It is a form of advertising and commercialization in which the own economic interests of each individual are ultimately enforced, and the focus is not necessarily on the common good. However, according to Smith's thesis, the general public and its economy are also driven by the actions of each individual - the market regulates itself and is strengthened by the essentially selfish idea of further development of each individual. The concept of temporary business models is increasingly commercialized and ultimately turned into a product. Pop-Up is the epitome of a capitalist social structure and promotes the Homo Economicus-thinking. Similar to the Invisible Hand, this describes a theoretical model of a person who behaves completely rationally when making economic decisions. This concept serves as the basis for many economic theories and assumptions but is heavily disputed amongst scientists.

A criticism of the model of the Invisible Hand and the concept of Homo Economicus is that, in neoliberalism, the self-regulation of the market for the benefit of all participants does not always function as intended in theory. In this capitalist market economy, power can quickly become concentrated in monopolies, leaving significant control over important societal decisions in the hands of a few individuals or small groups. This issue can also be applied to the problem of Pop-Ups, where time plays a critical role. The competition for vacant and temporarily available spaces that could become future Pop-Ups often favors those who can transform concepts and ideas into reality the fastest. In such cases, big commercial businesses with their marketing resources are often quicker than, for instance, cultural initiatives working to establish spaces that provide non-commercial, inclusive access to shared and publicly accessible areas. These types of initiatives usually require more time due to higher organizational demands and less support from politics and society. As a result, access for cultural institutions and community-oriented groups that aim to engage critically and constructively with public spaces is made more difficult. A potential solution could be a competition for the best ideas rather than adhering to a „first come, first serve" principle.

The topic of platform-oriented capitalism plays a significant role in the context of the Pop-Up pattern when viewed from a critical perspective. In his book Platform Capitalism, Srnicek argues that platform capitalism is a response to the crisis of traditional capitalism (e.g., overproduction and declining profits). However, it also introduces new issues, such as the concentration of power, surveillance, and the precariousness of work. Within platform capitalism, various types can be distinguished. Pop-Ups could be categorized as part of the sub-group of labor rental platforms—for instance, companies like Uber, which facilitate services but do not directly employ workers or own assets within the company themselves.

This aligns closely with the theme of the book *Platform-Based Cities*: Public Plurality in the Age of Data-Determination, particularly in the sixth of ten theses, which addresses the idea that „Platforms are the new landlords of digital capitalism." Basically, platforms insert themselves into every type of space and transform it into a service designed to sell and generate profit. The ultimate goal of the platform creators is for those who use the service to own nothing and become dependent on the system. These platforms charge fees for access to spaces rather than ownership or possession of them. This principle is not fundamentally different from that of landlords in an earlier era of feudalism. The thesis can be applied to the issue of Pop-Ups, as they employ a similar principle. Space is no longer something owned but becomes a temporarily available asset. This raises the question: What happens when space increasingly ceases to be owned by individuals, and power becomes concentrated in a monopoly controlled by a few?

Another criticism driven by Pop-Ups is their promotion of capitalist consumption. Due to their fast-paced and ever-changing concept, customers are encouraged to buy more and own more, spurred on by the marketing strategies of Pop-Ups. This is primarily fueled by the ephemeral nature of these locations. The short-term availability creates a sense of urgency among people, making them feel they must visit and purchase items quickly before the Pop-Up disappears or reaches its predetermined end-date. This amplifies the psychological effect of fearing missed opportunities— the notion that there is a unique (purchasing) chance that will soon be gone. Social media also plays a significant role in this economic subculture. Trends stemming from the previously mentioned currents of Pop-Up-ideas are predominantly shared via reels on social media platforms. This fosters a desire to belong to a community and to be part of the trend.

Conclusion and a potential translation to a larger pattern

Pop-Ups, as temporary and flexible uses of space, reflect key aspects of platform-oriented capitalism: Monetizing access instead of ownership, concentrating power in a few hands, and promoting consumption through artificially created urgency and transience. While they can foster innovative entrepreneurship and creative concepts, they also reinforce existing inequalities and capitalist dynamics. The fleeting nature of Pop-Ups generates psychological pressure that drives consumption, while reliance on digital platforms and their reach further centralizes power structures.

When returning to the way patterns are generated and described by Christopher Alexander, Murray Silverstein, and Sara Ishikawa in their book *A Pattern Language*, the pattern and idea of Pop-Ups can be understood as part of a larger pattern and thus can be developed into a type of language. It could be seen as part of a larger scale of temporary, adaptive structures. This becomes especially interesting in the context of temporary architecture in urban spaces, which can be found in many different facets and scales. Smaller interventions might appear, for example, in the streets in the form of informal markets and stalls. They can also take the shape of temporary communities, such as short-term social gathering spots or cultural institutions that, as temporary architectures, create societal value for a place. Or it could involve activating vacant spaces through various artistic, political, and socially critical ideas. This could take the form of event-driven architecture, resulting in structures that adapt to temporary events and circumstances.
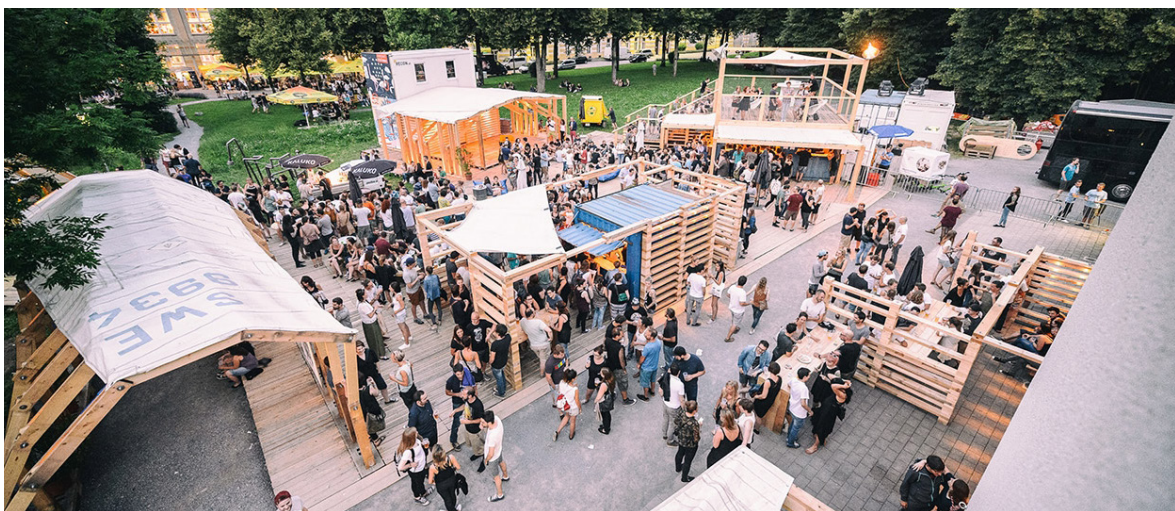
fig. 14, larger pattern, temporary structures, poolbar festival 2017 photo: altes hallenbad feldkirch 2017

Bibliography

Books and Texts from the Seminar

Alexander, C., Ishikawa, S., & Silverstein, M. (1977). A pattern language: Towns, buildings, construction. Oxford University Press.

Sadowski, J. (2020). Too smart: How digital capitalism is extracting data, controlling our lives, and taking over the world. The MIT Press.

Srnicek, N. (2017). Platform capitalism. Polity Press.

Smith, A. (1776). An inquiry into the nature and causes of the wealth of nations. W. Strahan & T. Cadell.

O.V. Homo Oeconomicus. 11. Vorlesung, Sitzung vom 28. März 1997.

Components of a Platform City.

Articles/Papers

Groß, M. (2015). Pop-up im Mikromaßstab. Chemie in unserer Zeit, 49(2), 120. https://doi.org/10.1002/ciuz.201590015

Ihr Pop-Up-Store im Wiener Gemeindebau - Paper from the City of Vienna, https://www.wienerwohnen.at
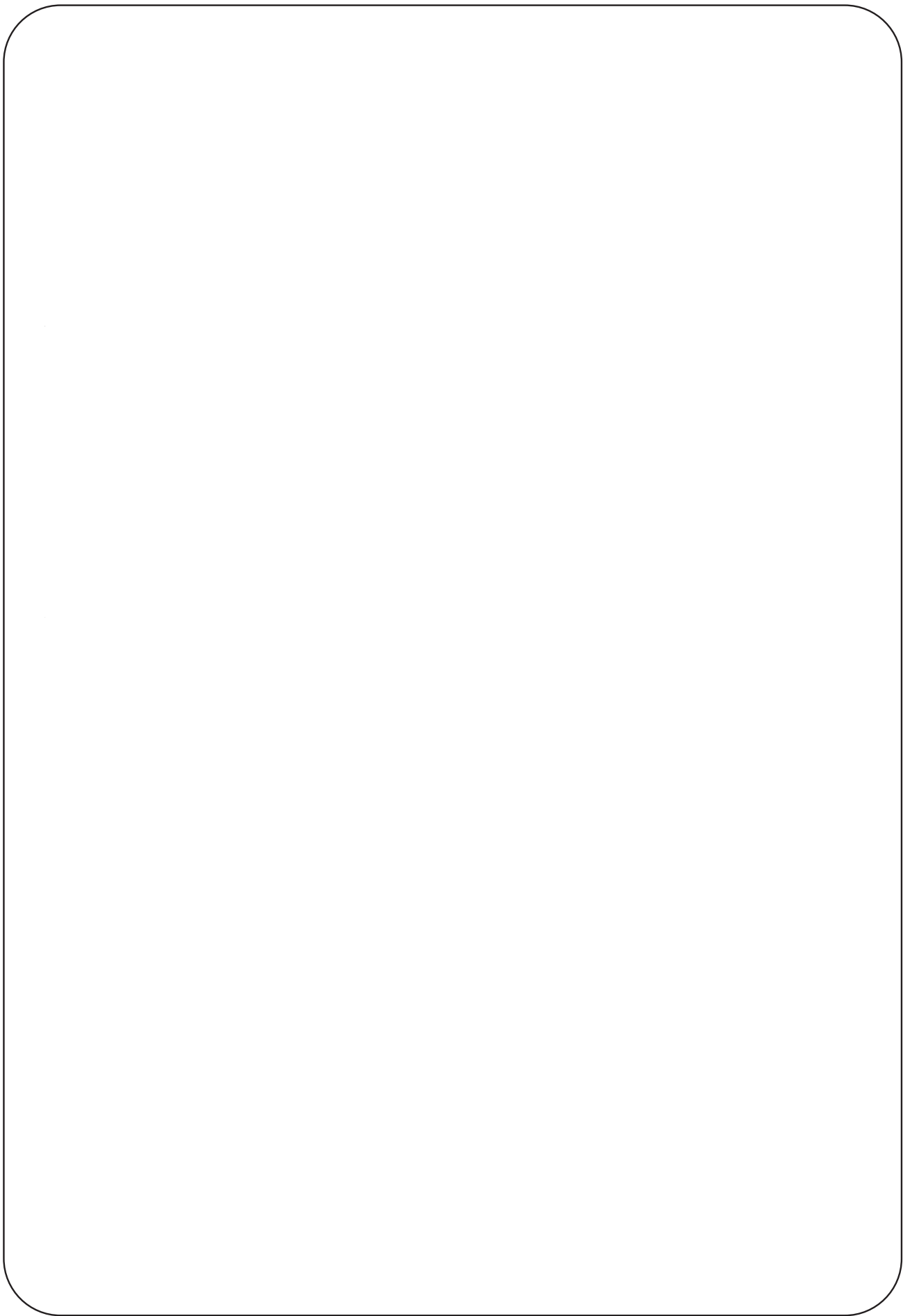
Websites

http://www.othermarkets.org/index.php?tdid=18&txt=1

https://gopopup.com/de/success-stories-de/

https://www.welt.de/finanzen/immobilien/article157968111/Warum-Pop-up-Stores-kein-Allheilmittel-sind.html

https://urban-matters.org

https://www.carla-wien.at/carla-shops

https://www.facebook.com/VisionscafeStadtHohenems

STEFANIA-IOANA MELEAN

Micro Apartments

The phenomenon of Micro Apartments has gained a lot of attention amongst students and young adults in their twenties or thirties in recent years. They come as a great alternative to having roommates to be able to live close to the city center.
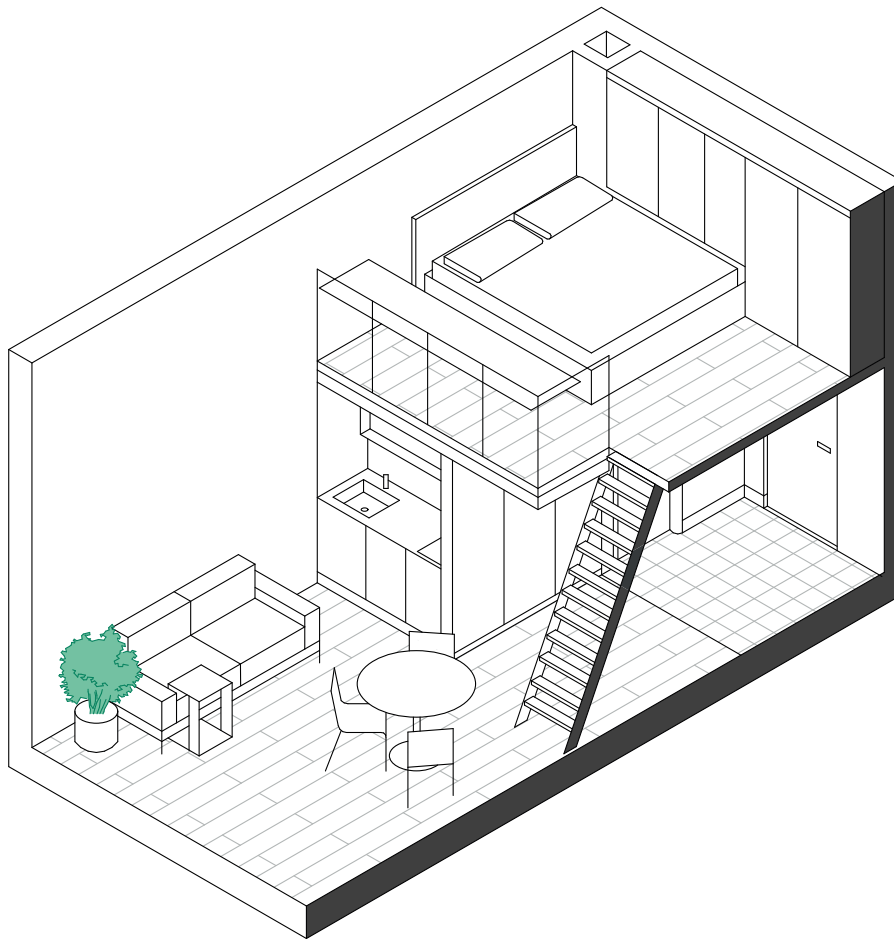
Micro Apartments

The subject of Micro Apartments is not as recent as one would think. In Japanese culture, for example, homes were designed to both, work efficiently and have a certain degree of flexibility due to the rapid increase of population and limited land use in the 1990s (Kokusai Express Japan, 2018). However, this tradition goes back long before what we call today Micro or Tiny Apartments.

From 1970 to 1972, architect Kisho Kurokawa designed the Nakagin Capsule Tower Building in Tokyo, part of the Metabolism movement that took place after the 1960, when Japanese cities were reconceptualized after the destruction of the Second World War (Chayka, 2022). This represented the first example of capsule architecture built for practical and long-lasting use. However, in 2022, after the residential and office towers fell in disrepair, the demolition started, and only 23 capsules got saved and some can nowadays be found at the San Francisco Museum of Modern Art in the United States, in Ginza, Japan or traveling to sites in Japan (Florian, 2024).

The building was composed of two concrete towers with a total of 140 prefabricated capsules that made the short construction time possible. Looking inside the capsules, one could almost say that they remind them of a space station given the furniture, doors and window design. One such capsule measured 10 m2 (2,5 m x 4,0 m) with a height of 2,5 m. Every unit acquired a small living space, lit by a circular window, and a bathroom with a modest shower (Wikipedia contributors, 2024).
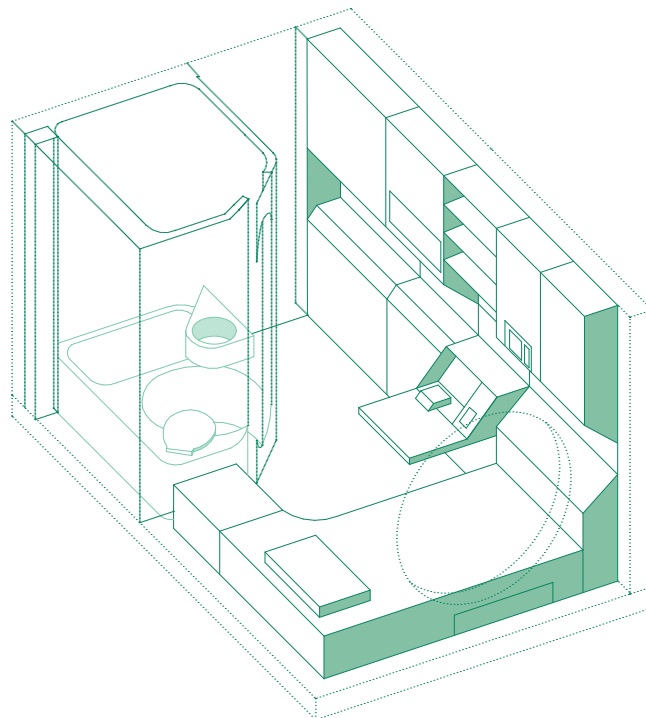
fig. 1 Axonometric view of a Nakagin Capsule, photo: Aldiana Bektas, 2025

Big cities like New York, London or Seattle are currently facing the same issues as Japan did over 30 years ago. The lack of land availability and high density of the cities forced them to produce living solutions that would, on the one hand, be more affordable and, on the other hand, be in the inner city. Therefore, they came up with the concept of micro apartments with a smaller living space than a normal studio apartment that provides cheap rent and an ideal location for people who have a modest income and would rather live in the city than must commute.

As a result of the reduced size of these residences, as far as 10 square meters, other benefits about them should not be left out. Saving money, less maintenance or decluttering can reduce stress and, for young adults, especially, give a sense of independence that a lot of people in their age group aspire towards. For them, this portrays the perfect temporary solution. Nevertheless, the minimal initial fees and the lack of deposit—a nonrefundable payment to the landlord—are also very attractive, so much so that those payments can go up to three months' rent.

In Tokyo, Japan, for instance, the rent for such apartments can go as low as 370€ (¥50,000) per month and rise to around 490€ (¥80,000), if located in more popular areas such as Ebisu, Nakameguro or Shinjuku. Prices that are 120 to 180 euros (¥20,000 to ¥30,000) lower than the average for their location (McCurry, 2023). Accordingly, the vacancy period for them is less than a studio apartment in the same area. A new tenant can be found in about two weeks (Spilytus, 2025).
Topologically, these apartments vary in size between 10 and 20 square meters and provide the tenant with the bare minimum to live comfortably. They are usually supplied with a kitchenette, a small shower and toilet, a living space that sometimes also serves as the bedroom, and depending on the design, a lofted bed. A lot of built-in furniture with multiple purposes is being used throughout the whole micro apartments' scene in order to provide more storage space and functionality.

One such example is the Ququri from the real estate developer named Spilytus across Tokyo. The company had one fixed purpose in mind while creating these types of living spaces, which was to support young people working hard in Tokyo, building over 100 micro-apartment buildings in total. Rather than having large rooms with high rent, have the "cocoons" that provide comfortable, cheap places that allow people to invest energy and time in themselves. (Spilytus, 2025).

One ququri is 9 square meters, half the size of a one-room apartment. The ceilings are 3,6 m high with a lofted space used differently by various tenants, either as a sleeping space, storage space or closet. When you go in, you are welcomed by a small corridor, which accommodates the kitchenette. Across from it, a small toilet and shower are found, only 50 cm away. Going further into the home, you find the living space with the high ceiling. The staircase that leads to the loft can usually be retracted by rotating it 90 degrees and fixing it on the wall. Clean lines and light colors take over the architectural design of these spaces, which make a great canvas for individuals to turn them into a home.

Their unique and clever layouts try to combat the feeling of a cramped space by including high ceilings, large windows, light colors and various plants that enhance the sense of home. But making such a small space feel like home is something that is getting a lot

of criticism from a sizable number of people. We cannot forget the fact that these types of apartments are not for everyone. People cannot see themselves getting rid of their beloved belongings and embracing the journey of discovering what are the real possessions for daily necessities. Therefore, we can analyze three perspectives using Jacques Rancière's philosophy of sense vs. sense in pursuance of this pattern's core problem.

First, we need to introduce the three characters we are about to discuss. We have the people who choose to live in micro apartments out of need, then we have the people who like a minimalistic lifestyle, and then we have the skeptical ones who have a critical perspective towards the subject.

Second, we must analyze each individual category. The first two categories are trying to make sense of the idea of living in a significant small space and how beneficial this lifestyle can be. The considerable difference between them is that the people in the second category are already acquainted with the idea prior to moving in. Accordingly, their sensory perception is not affected negatively by the change. As for the first group, where we can talk about a controversial perception, the last group can only perceive the unfavorable aspects of it. Perspectives that are strengthened by people not considering the reasoning behind others' choices. In a way, the making sense of it alters towards convincing others as to why it is bad.

Therefore, as a next step, we are going to evaluate the last character further on by questioning the depth of their reasons. Do they only have issues with the size of these living spaces, or do they think there is a bigger problem we are not taking into account? On the one hand, we hear critics towards physically separating the sleeping space from the rest of the areas. On the other hand, the critic goes towards the lack of urban housing for young, underpaid workers, with the quality of life sacrificed for convenience and affordability.

Additionally, to the critic above, there is another topic that should be addressed in relation to it. The "sacrifice" that comes with choosing such apartments has a well-grounded logic. Companies across big cities, including ones with high density populations, tend to locate their offices towards the inner city. As mentioned before, housing is quite expensive in those areas; therefore, people have three choices. The first choice would be living in the outer neighborhoods and commuting to work, which most of the time is equal to long driving hours. The second one would be living towards the inner city but sharing an apartment with other people, and the third would be giving up on foot plan and living a rather modest life.

Not all the cities in the world are living in the same rather idyllic housing market as Japan does. On the contrary, Hong Kong is currently facing a less fortunate fate. 1 in 7 citizens are living these days in poverty, and the government cannot seem to reach the necessary homes that could combat this recurring issue. Coming in second, after New York, the city of Hong Kong remains one of the most unequal cities in the world. What is in everyday language known as "coffin homes" shelter more than 200.000 residents. These people are facing a world in which the average monthly income is at around 310 euros, which barely covers the rent for a coffin home that stands between 215 and 298 euros (Haas, 2020). Not to mention that the waiting time for public housing is more than 5 and a half years, according to the housing authority in Hong Kong (2024, November 10).

Benjamin Haas takes us on his journey in the Lucky House, Hong Kong, where he lived for one week with 29 other residents in a 45-square-meter apartment in one of the built plywood bunk beds. Getting to know some of them was quite the experience; retirees, the working poor, people with mental health issues, and drug addicts all live under the same roof. Although that might sound a bit alarming, the residents were really welcoming, and some were also keen to show him the coffin life.

He went for one of the lower beds, even though the rent for the upper one was lower. His cubicle measured 60 cm wide and 170 cm long. For his height of 178 cm, the place felt rather cramped. During the night he would hear his neighbor's action movies, the constant snoring and the early morning alarm clocks going off. One could not tell the time while living there, as the apartment was only illuminated by a window situated on the other side of the space (Haas, 2020).
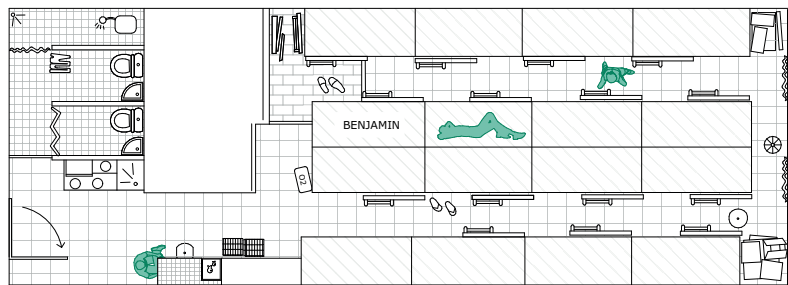
fig. 2 Floor plan „coffin" apartment based on Suming, 2025

His experience showed him how bad the living conditions in such spaces are. Bugs crawling over you, an environment filled with drugs and drug abusers, and certainly, hygiene is something one cannot talk about. With a shower shared amongst 30 people, there are no high expectations, given their situation. However, the apartment itself was not as bad as other small, subdivided flats.

A perhaps improved approach is taking place on the American housing scene, which is trying to transform the face of homelessness. Hope the mission is to be a non-profit organization that brings change regarding this very subject. Their operation is much more complex than putting a roof over the heads of the less fortunate. They aim to provide these people with three meals a day, case management, laundry facilities and a dog run/ pet relief area beside the essential necessities like beds, restrooms and showers.

Looking at their second-largest Tiny Home Village named Alexandria Park in North Hollywood, California, one comes upon a vibrant environment where each home is painted in a mix between white and bright colors. Consisting of 103 units, the village can accommodate up to 200 residents. One house is about 6 square meters and comes with two beds, air conditioning, heating, four windows, storage space and a front door that can be locked. Living here means getting the chance to access job training and placement and, further on, move into an actual home, the support needed to take a fresh pathway (Tiny Homes Villages—Hope the Mission, n.d.).

Now let us get back to rental apartments that are intended for young professionals, where the price of the rent is the focal point. Arriving in a 6,3-square-meter living space

in Upper West Side, New York, in the winter of 2018, Amy Plitt's first reaction was, "It takes the concept of micro-living to a whole new level." For 950 dollars per month, one can get a loft bed that can only accommodate a twin mattress, a fridge and a stove. As for the bathroom, one must share it with 4 other apartments, and tenants need to clean it on schedule. Even worse is the way they advertised it saying that although it is probably the smallest apartment in Manhattan, it is also probably the least expensive (Plitt, 2018).

The broker's affirmation, however, is not true anymore. Erik Van Conover, a real estate agent from New York City, gave us a tour of the tiniest apartment in NYC, indulging us to guess how much the rent is. It measures a total of 5,1 square meters, with the width less than 2 m. A lofted space can probably accommodate a twin mattress. There is no proper kitchen or even a kitchenette inside. A fridge, a sink and a microwave welcome you once you get through the front door. Across from them, you find built-in shelves and a wardrobe, and the bathroom and shower can be found in the hallway (Conover, 2022).

After analyzing the Micro-Apartment scene throughout some of the biggest cities in the world, Tokyo, Hong Kong and New York City, we can see the increased necessity of such accommodations. Inevitably not all of them are good examples, the purpose of the analysis was to show both sides of this topic and how they work. Therefore, we can consider the Ququri apartments from Spilytus the good example and the "Coffin" apartments the bad one.

fig. 3 Interior of one Ququri apartment taken during the inerviews conducted by Spilytus, photo: Spilytus, 2019

We know that tenants generally complain about the size of their homes, where also the criticism from the vast population lies upon. But let's look at some interviews conducted from 2018 to 2019 with Ququri's residents and what minus points they acknowledged. In room 12 lives MK, an 18-year-old student, who, besides a little extra storage space, appreciates the loft and says she is comfortably living there. A couple other residents seem to confront the same issue, which is also addressed to the hallway where the kitchenette is positioned.

Further on, in room 02 lives TT-san, a 23-year-old student who was pleasantly surprised when his massive desk fitted inside the condo. The environment he created is perfect for concentrating and studying. The only minus he sees is the humidity built after hanging his laundry. As for two other residents, SI-san in room 05 and A.W. in room 19, a bigger kitchen would be highly welcomed.

Lastly, while reading through the other inhabitants' stories, I came across a lot of complaints about the noise, either coming from the stairs or the neighbors living above. Given the fact that this is a recurring issue, this should be the starting point for improving these types of apartments.

Accordingly, a quick fix would be to fabricate the apartment buildings with better materials and soundproof the walls of the individual flats. Furthermore, the problem with humidity can be conquered by installing air conditioning that is positioned on the upper part of the high walls. A second option would be to plan a laundry room for all the residents, equipped with 2 to 4 dryers, depending on how many flats there are. By having an alternative to drying clothes inside, there will be a major decrease in humidity, which can also prevent more alarming problems like mold or bacteria.

The problems with storage space and kitchenette should be addressed in relation to the floor plan and the design of it. Spilytus is one of the few companies that are constantly involved in the process of conceptualizing good layouts for the rooms and making minor changes even before these are built. However, we need to talk about adjustments that make a more valuable difference in the functionality of the floor plans.

The first solution comes from the tiny house scene, which is the multifunctional furniture. Because a lot of these homes were to be taken on the round, some regulations needed to be followed. Therefore, architects and DIYers had to rethink the purpose of "traditional" furniture and come up with efficient ways to use every centimeter of the room for maximizing the storage space and still leave space to breathe. Cutting boards that can be hidden when not in use, folding beds, folding tables and such that can get turned into sleeping couches are only a few examples that can have a big impact on the tenants.

Table   Chair   Ladder
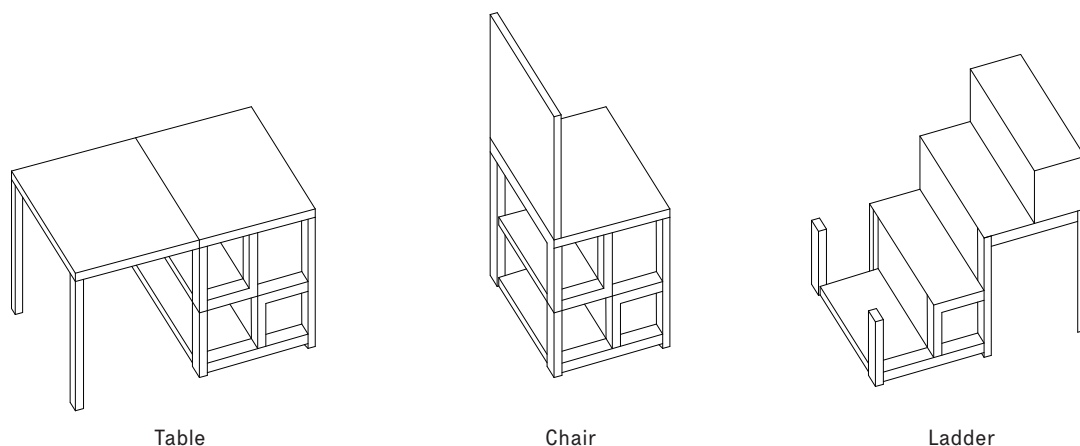
fig. 4 Axonometric view of a multipurpose piece of furniture, photo: Pinterest, 2025

As for the size of the kitchenette, another 20 cm can be brought between the bathroom/shower and the kitchen and further on be expanded in the living space. By designing a collapsible countertop, for example, the cooking space gets enlarged, and by having a tall ceiling above the head, conveys an impression of openness.

With all the discussed issues, Spilytus is still a great example of how such apartment buildings can work without coming across unsafe, unhealthy and dangerous conditions as we see nowadays in Hong Kong and saw in the past, in the late 19th and early 20th centuries in New York City. Back then, the Single Room Occupancy buildings and hotels provided low-cost rooms with shared bathrooms and kitchen for poor workers and immigrants but were destroyed by bad management practices and low-maintained facilities (Manhattan Institute, 2023).

As far as New York goes, the Manhattan Institute came up with recommendations aiming to increase the diversity of housing options in NYC and assist the progress of development corresponding to the needs of the city's shifting demographics. They already have some well-configured regulations, like the minimum room dimensions, the minimum habitable square feet per person in an apartment, or accessibility codes that they can adjust based on other housing models.

Hong Kong, however, has a more complex problem to solve first before designing similar micro apartments as the one in Tokyo. First, the minimum habitable living space per person needs to be increased. By doing so, the existing subdivided flats require renovations that should have taken place a long time ago. Materials that keep bedbugs away and perhaps bigger windows are two factors that can develop a healthier environment and keep the mold away. Concerning the increased demand for such affordable apartments, the government must invest on one hand in researching ways on how unsafe conditions can be avoided by studying the broader scene of the tiny flats and on the other hand by actually building these apartment buildings.

The issues regarding the subject discussed in the last paragraph are bigger than Micro Apartments. Therefore, I would like to conclude by saying that the Japanese scene has a long history of the tiny homes, one from which we can learn how to design more efficiently and flexible.

STEFANIA-IOANA MELEAN

<u>Micro Apartments</u>

fig. 5 Larger pattern, Instagram seen as an economic activity , photo: Llozana, 2025

The tiny flats scene is currently taking over Instagram. From advertising these types of living spaces to questioning how they can be so minuscule. Some go as far as asking around the streets of New York for instance how much people pay for rent per month, followed by the question if they would be up for giving them a tour of their apartment. While some of the homes are big studios or multiple room condos, they manage to come across the smaller ones as our lofted micro apartments.

The social media, however, seems to have mixed emotions about them. As the majority of people criticize their dimensions, some people would actually see themselves living there and go for a more minimalistic home by additionally taking advantage of the ideal locations. Consequently, the popularity increases and for a short moment, Instagram turns into an advertising tool5

Micro Apartments

References:

- Kokusai Express Japan. (2018, July 24). Benefits of micro-apartments in Japan. https://ksemoving.com/benefits-of-micro-apartments-in-japan/

- QUQURI | (SPILYTUS). (n.d.). SPILYTUS. https://spilytus.co.jp/ququri/#ququri01

- McCurry, J. (2023, March 20). You could cook while on the toilet: a night in one of Tokyo's micro-apartments. The Guardian. https://www.theguardian.com/world/2023/mar/20/you-could-cook-while-on-the-toilet-a-night-in-one-of-tokyos-micro-apartments

- Chayka, K. (2022, April 28). The life and death of the original Micro-Apartments. The New Yorker. https://www.newyorker.com/culture/dept-of-design/the-life-and-death-of-the-original-micro-apartments

- Wikipedia contributors. (2024, November 20). Nakagin Capsule Tower. Wikipedia. https://en.wikipedia.org/wiki/Nakagin_Capsule_Tower

- Florian, M. (2024, August 9). Where Are the 23 Modules Saved from the Demolished Nakagin Capsule Tower Now? ArchDaily. https://www.archdaily.com/1006528/where-are-the-23-modules-saved-from-the-demolished-nakagin-capsule-tower-now

- Number of applications and average waiting time for public rental housing | Hong Kong Housing Authority and Housing Department. (2024, November 10). https://www.housingauthority.gov.hk/en/about-us/publications-and-statistics/prh-applications-average-waiting-time/

- Haas, B. (2020, February 3). My week in Lucky House: the horror of Hong Kong's coffin homes. The Guardian. https://www.theguardian.com/world/2017/aug/29/hong-kong-coffin-homes-horror-my-week

- Tiny homes villages – hope the mission. (n.d.). https://hopethemission.org/our-programs/tiny-homes-villages/#

- Plitt, A. (2018, February 6). This 68-square-foot Upper West Side SRO is renting for $950/month. Curbed NY. https://ny.curbed.com/2018/2/6/16980120/upper-west-side-sro-tiny-apartment-for-rent

- Manhattan Institute. (2023, March 3). Small is Beautiful: Micro-Units Can Help Make NYC Housing Affordable | Manhattan Institute. https://manhattan.institute/article/small-is-beautiful-micro-units-can-help-make-nyc-housing-affordable-2

- Exploring Tokyo's most unique tiny apartments: a Micro-Living Adventure. (n.d.).

<u>Micro Apartments</u>

E-Housing. https://e-housing.jp/post/explore-tokyos-revolutionary-micro-apart-ments-tiny-apartments-redefining-urban-life-discover-why-many-have-decided-to-live-in-these-compact-apartments-transforming-the-citys-housing-landscape-and-pushing-the-boundaries-of-minimalist-living-in-tokyo

Table of figures:

- Fig 1,2,3,5: own work
- Fig 4: room36 QUQURI | SPILYTUS. (n.d.). SPILYTU. https://spilytus.co.jp/interview/room36/ Interior of one Ququri apartment taken during the inerviews
- Fig 6: Larger pattern, Instagram seen as an economic activity, photo: Llozana, 2025
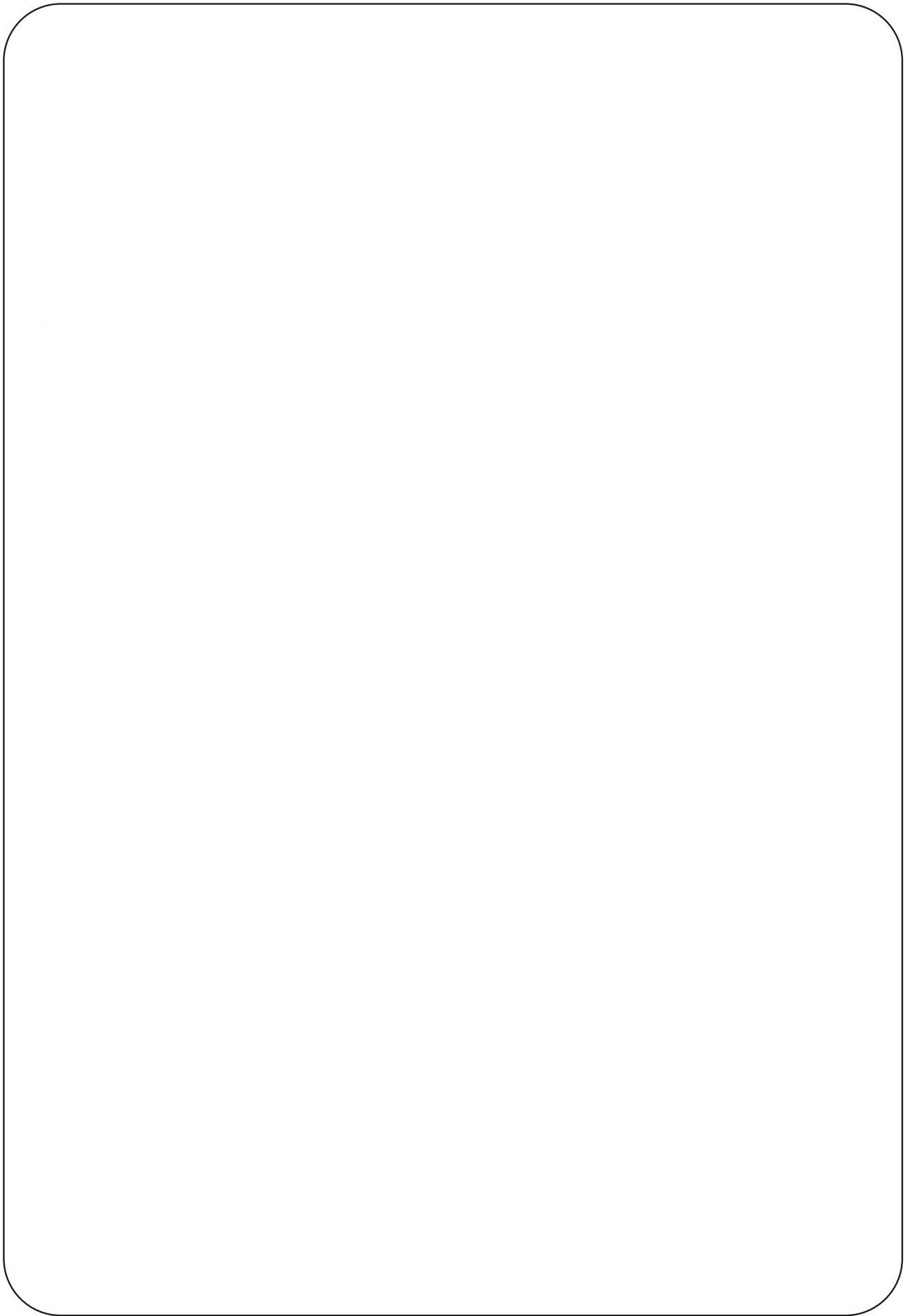
DAVID KERNSTOCK

Storage Houses

Our mobile society's hunger for consumption results in many symptoms. Self-storage houses are an urban development option, which find space in the middle of our cities to give things a home.
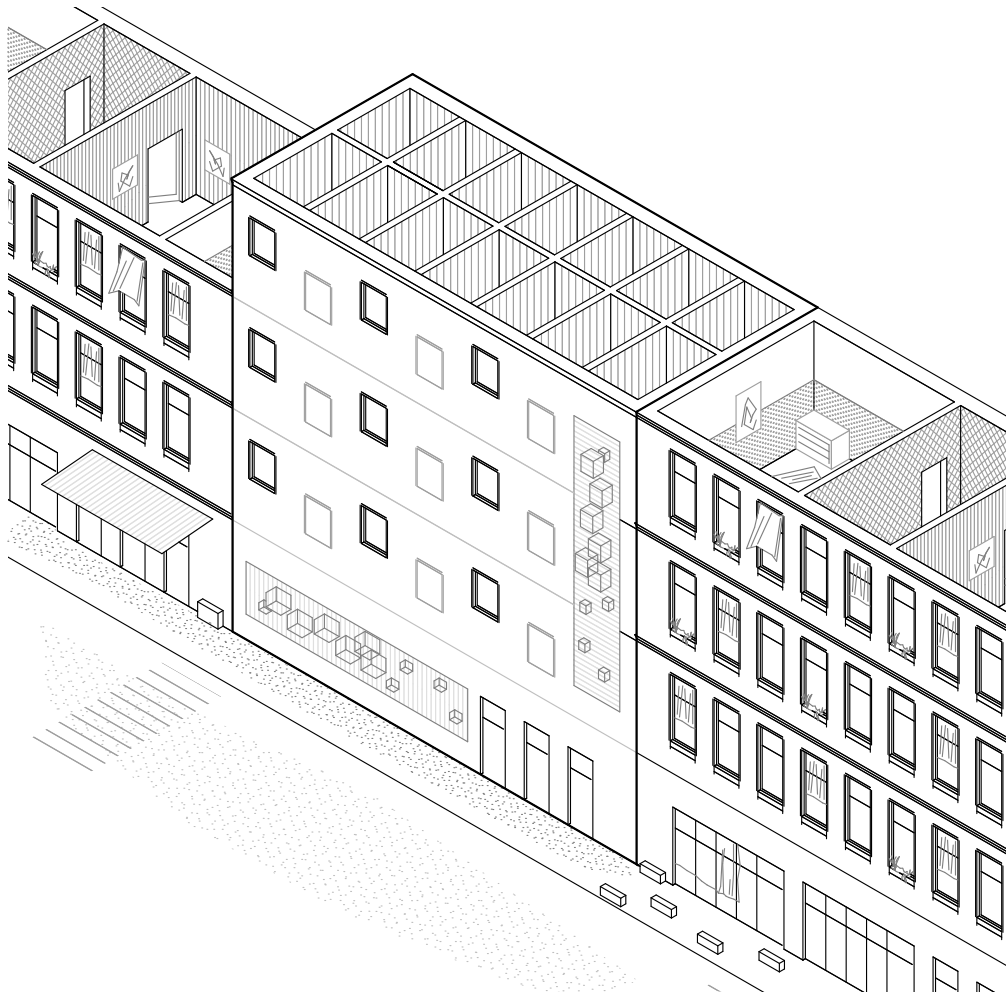
Storage Houses

Where would we be without the things we own?
The artist Michael Landy asked himself this question in 2001 and counted all his possessions, resulting in 7,272 objects. He then exhibited every single item in a gallery space, where all the pieces were placed on a conveyor belt and broken down into their individual parts by employees. Books, kitchen utensils, CDS, tickets, photos, watches, a car and even his birth certificate could be found there. He called this 'a reflection on the hidden relationship between the individual, possessions and identity.

Today, there is a shift in consumption needs and practices, which is reflected in the development of new business models and infrastructure solutions. One symptom of this development is the emergence of rentable storage spaces, which are establishing themselves as a new typology, especially in urban areas. These spatial solutions are not only a result of the growing volume of goods consumed, which requires the creation of additional storage space, but also a reaction to the rising rental prices for residential space in major European cities. The trend towards renting storage space represents a new form of space utilisation that converts existing space used for other purposes into storage space. For investors, this offers flexible, high-priced utilisation with a high profit distribution. This development is part of the broader platform economy, which is based on the linking of physical and digital infrastructures and is supplemented by specialised business models such as those of logistics franchise companies and mail receiving stations. Storage spaces therefore benefit above all from today's increased mobility. But also from changing lifestyles and biographical incisions, such as relocations and homelessness. However, an automated mail receiving station can also be helpful for online orders so that parcels can be collected outside of opening hours. It turns out that countries in Europe where residents move most often tend to have the highest amount of self-storage space.

According to estimates, people in the western world now own an average of 10,000 items. Despite the trend towards minimalism, which is being promoted in design magazines. Even what used to be used as storage space, such as attics, is now being converted into living space. Flats are tending to become smaller and more expensive, offering less space for higher rents. The phenomenon is exacerbated by fixed-term tenancy agreements, making frequent moves necessary.

Capitalism creates lifestyles that harmonise with consumption and also offers justifications for it, as described by Boltanski and Chiapello in 'Le Nouvel Esprit du Capitalisme'. It is a system that relies on decentralised but closely connected networks that are constantly optimised to achieve efficiency and value creation. The franchise model for urban logistics is a practical example of this trend. It enables the utilisation of warehouse space and logistics networks by providing a platform to manage franchisees that combine both physical infrastructure and digital management in one business model. This creates an agile and scalable system that allows companies to react quickly to changes in consumer behaviour and delivery logistics.

In this context, storage providers, urban logistics franchises and mail receiving stations represent three specific but interconnected patterns, each representing different specialisations within the platform economy.

What are self-storage buildings and how do they make it into our cities?

When observing the public space of a large European city, many different things can stand out depending on the focus of the observer. For example, a tourist can take things in a city for granted that strike a resident as a new foreign object. The best-known phenomenon in this respect is gentrification. Shops, people or buildings are displaced and new ones are added. This often happens inconspicuously with small nuances such as more modern self-made café signs or refurbished shop fronts. However, there are also phenomena far removed from gentrification that can change the cityscape. Urban spaces, or rather the buildings that shape them, can also change more drastically. For example, there is a trend towards multi-storey buildings with sheet metal façades, no windows with only one or two entrances on the ground floor, huge advertising spaces that identify the buildings as public places, framed by a perimeter block development in an urban district.
What would a tourist say about such a building? What would a resident think if, in the past, instead of a monochrome corrugated iron façade, there was a residential building with lots of windows?
Buildings that don't need windows, that would mean there is dead space behind the façade. But these houses belong exclusively to things. New buildings on major roads or junctions. Initially on arterial roads on the outskirts of cities, mostly in business parks or industrial estates, this typology is now increasingly coming to city centres. Warehouses for things that people accumulate or want to accumulate and cannot find a place elsewhere.
This is an invention from the USA, which grew up there and came to Europe as a result of the increasing mobility not only of people, but above all of materials. In the USA, this is still a suburban phenomenon today, where it can be seen in garage-like structures that characterise entire city districts, which is due to the sprawling urban structure there. In the 1970s, the first large national self-storage company emerged. Today, this industry is categorised as one of the most crisis-resistant in America. Here, 285,000,000 square metres are now occupied by things alone. Converted to Germany, that would be around 12,000 warehouses, although there are only 200 as of 2018. In 1999, 'MyPlace' was the first company in Germany and in Vienna to take over the market here. Initially offering over 195 m² of storage space in Vienna, it has grown to around 48,000 m² in 2018, divided into 10,300 compartments. Supply and demand have risen rapidly, and the number is likely to have increased again today. But buildings that store things are nothing new in Europe. Back then there were granaries, armouries or agricultural silos, although at first glance this type of typology appears to be the same as self-storage buildings, the reason why they exist separates them. If at the time such storage was an expression of low mobility, as the process of production was directly linked to storage, it is the opposite with modern storage facilities. Industrialisation has made people, but above all things, more mobile and what the train station or car park is for people, self-storage buildings are for things.
In order to understand this typology more precisely, it is helpful to compare them with each other, but also with residential buildings for people. Although many of these buildings look strange from the outside, the biggest difference between them and residential buildings is on the inside.

Self-storage buildings can be found in cities with a population of around 200,000 or more, as such a size is apparently only profitable for providers. In most cases, it basically consists of the same modules. According to Bauwelt 10/2013, these are the following elements:

As users usually access the building using an individual vehicle, a large driveway is crucial. This is followed by a car park consisting of plots that are large enough for a goods vehicle. A goods lift with at least two staircases is also a recurring element in order to be able to transport the items to be stored to the upper floors. There is also an office with a reception desk and information desk on the ground floor, similar to a hotel. The remaining space is filled with storage rooms, which can also be used to respond to a wide variety of property shapes. The result is almost a generic building with unique features, which brings with it the idea of being easily generated by AI in the future.

Maike Anastasia Astroh goes even further in her master's thesis, however, and categorises the buildings according to their urban development footprint. Self-storage in existing mixed-use areas with a residential focus, in mixed-use areas with a commercial focus and in purely commercial areas. The former can be found on highly frequented streets with good public transport connections and are a logical choice due to perimeter block development. Nevertheless, they are often used as sound insulation against traffic noise and are also a popular way of separating residential areas from major roads in new development areas. The further out they are located from motorways, the larger the storage compartments. As land prices are lower in these areas, they can hardly be distinguished architecturally from warehouses in industrial estates. In these areas, there is also no high demand for aesthetics and disputes about the correct integration of a building into its context. Due to the lack of design requirements for such areas, the self-storage building blends in most naturally there. However, this may also be due to the fact that the phenomenon is simply an import of an American type from the motorised suburbs. It is therefore more difficult to bring these buildings into the culturally set density of European cities, which leads to strange phenomena. The result is attempts to adapt house facades, such as a recessed plinth storey, windows designed to imitate a residential building or even a pitched roof to conceal the next gable. (fig. 6,7) A 'My Place' branch in Nuremberg takes this camouflage strategy to the extreme. (fig. 1) With a transparent corrugated sheet metal façade with elongated window incisions at one corner, this warehouse could also be a museum of modern art. For building authorities or architects, despite the creativity of the operators of such buildings, it is difficult to integrate a type of building that is only used for storage and actually serves the purpose of a simple garage into the cityscape. Urban researchers are observing this development with concern as it is fuelling the desertification of public space.
Within a self-storage building, there is a lack of creativity on the part of the operators, which also reminds us that these are pure storage areas, large buildings with small-scale parcelling.
The corridors are characterised by a monochrome rhythm, similar in shape to containers with sheet steel walls and uniform rooms of different sizes. In order to avoid blindly walking past the doors of the compartments, the strictly lined-up entrances are colour-coded (fig. 3).

The compartments can only be distinguished from the outside by their number. But here there is a strong contrast between corridor and compartment. Because after the threshold, things are organised individually by use. Which suddenly makes the room very personal. The compartments have no light, electricity or water supply, as unused items require nothing but space. To minimise the stark contrast between the room and the corridor, soft music is often played from the loudspeakers. Video surveillance installed almost everywhere is the interface from corridor to compartment, from public to private. The room is secured with a lock, which the users organise themselves; the operators have to trust customers as they have no access to the room when it is occupied. The offer provides dry, secure and clean spaces for secluded storage compartments throughout the building. Available in a range of sizes, starting at around 1m² for smaller requirements, there are compartments that at 50m² are nicely larger than many student flats. Some providers also offer various additional services such as removal assistance, shelf assembly, packing materials, parcel acceptance, etc. So you can choose between standard or all-inclusive, similar to a hotel.

The only social interaction is with the staff at the information desk or the guard in the designated room at the entrance, otherwise you are on your own. However, the building can also be opened with a PIN code, which ultimately allows you to be autonomous, at any time and without personal contact.

But who rents such rooms and why?

One third of customers are business customers, such as tax consultants, online retailers or small craft businesses. Two thirds are private customers who have experienced biographical changes, for example, but also have private collecting passions. However, one thing is the same: people who belong to their rooms and things are mostly absent and invisible. In 'Where things live', individual exemplary scenarios of users who want to store their things there are illustrated:

They are people who feel restricted and weighed down by things, triggered by a society that propagates consumerism.

Also those who want to free themselves from their consumption frenzy and feign minimalism by hiding everything material in a 5 square metre cell. Actions that are reinforced by decluttering guides such as Marie Kondo, who advertise 'less is more' or 'magic cleaning' on TV or on the internet.

People who are professionally mobile and are already planning their next move when they move out need extra storage for all the things that don't fit into a small flat.

Also owners of a newly built flat who have to make do without storage space or a storage room because they cannot afford additional storage space or it is not provided for.

Short-term users, if the move has not worked out or the washing machine has been delivered.

Long-term users, for example, if they have a passion for collecting larger items, these naturally have to be stored somewhere. As these are not usually useful items, they do not need to be visited often.

So a compartment is a help out of necessity, for others out of pure luxury. Some customers only come once, others visit their compartment every day. For some, the room has become an important part of life, for others a temporary solution.
A closer look at the users reveals a poetic ideology of ownership. Biographies are linked to things. If you come across a box of long-forgotten things, another time comes to light. Nevertheless, self-storage houses can also create distance between things and their owners. They also generate time for a decision to be made about the whereabouts of the items, a kind of lock for things so that they can be somewhere else again. These compartments are very personal spaces; even in your own home, a storage room remains hidden from most visitors.

According to the book 'Wo Dinge Wohnen' (Where Things Live), many users even claim that their stored items are nothing special, and this is usually the case. For example, bicycles, car tyres, magazines, books or photo albums, Ikea furniture, leather coaches and toys. But many things have a very personal history that is only paused by the temporary storage and is waiting to be experienced again. They often relate everyday situations but also the challenges of living and working in the city.

The scenarios mentioned and the insight into the personal storage room show that nowadays a city can no longer do without its warehouses. If in the past attics or cellars were the storage rooms for houses that nobody really wanted to enter, today storage houses are an attic for our cities. Perhaps they can also be seen as temporary solutions for the hunger for consumption of our mobile society, which has to store its things there

fig. 1 Storage Housing in urban surroundings imitating neighboring buildings, photo: myplace

145

DAVID KERNSTOCK

Storage Houses

fig. 2 Diskont Depot, photo: Klaus Pichler, 2018

fig. 3 Storage Housing, Vienna,
photo: David Kernstock, 2025

fig. 4 Storage Housing, Advertisement „short bright ways",
Vienna, photo: David Kernstock, 2025

fig. 5 Storage Housing, Advertisement „short bright ways",
Vienna, photo: David Kernstock, 2025

fig. 6 Storage Housing near public transport hubs,
Vienna, photo: David Kernstock, 2025

fig. 7 Storage Housing in urban surroundings imitating
neighboring buildings, photo: David Kernstock, 2025

<u>Bibliography</u>

Print:

Wo Dinge Wohnen, 2019,
Martina Nußbaumer, Peter Stuiber,
Park Books

Bauwelt, 10/2013
Selfstorage

Websites:

https://www.thomasdanegallery.com/artists/43-michael-landy/works/

https://www.myplace.at/de?gad_source=1&gclid=CjOKCQiAkJO8BhCGARIsAMkswyhWY-GUtq-qrtmF9v-8EzGoAYjbjjGkn6zB9iG_mhKAARHHtXzVIXtIaApJJEALw_wcB

https://klauspichler.net/job/wo-dinge-wohnen/

https://www.petrabeck.at/

Storebox

Company that offers digital self-storage solutions. Customers can reserve their storage boxes via an app and access them around the clock. They are usually located in the first floor zones ofexisting buildings.

MIA GILLITZER
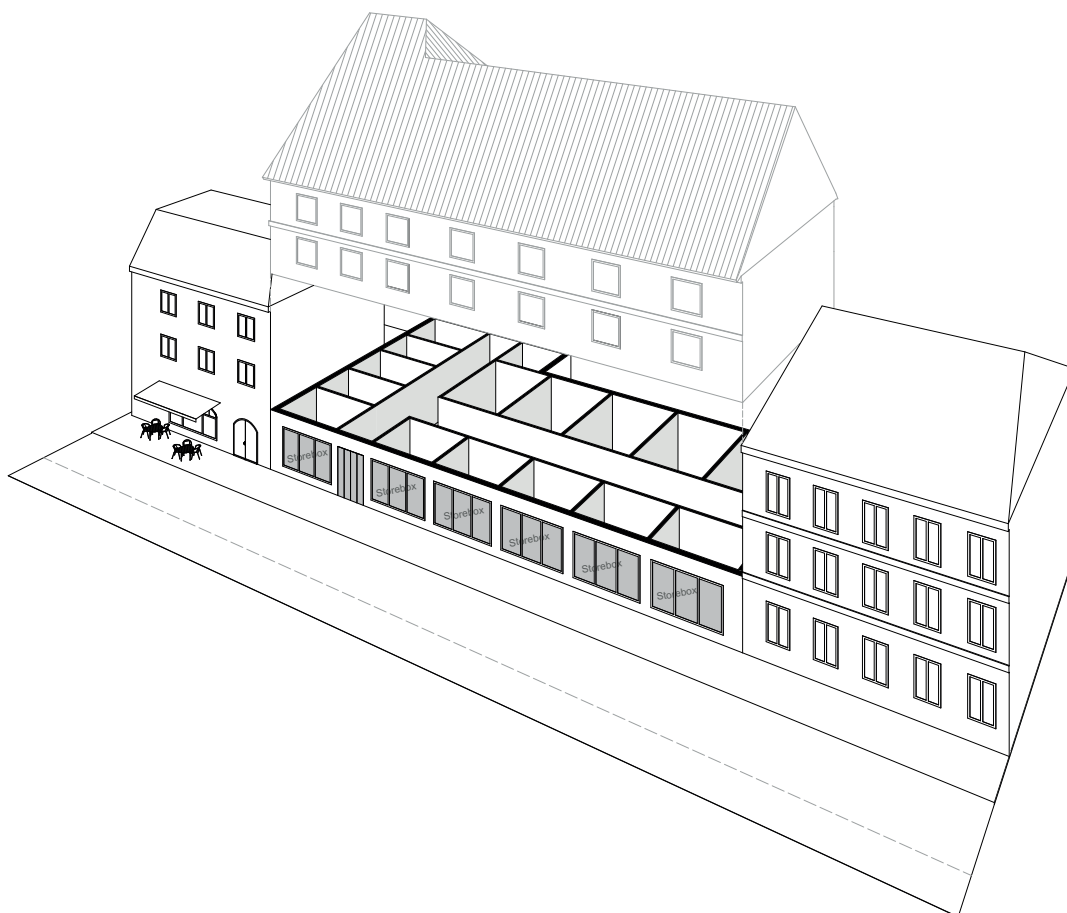
Storebox

Where would we be without the things we own?

The artist Michael Landy asked himself this question in 2001 and counted all his possessions, resulting in 7,272 objects. He then exhibited every single item in a gallery space, where all the pieces were placed on a conveyor belt and broken down into their individual parts by employees. Books, kitchen utensils, CDS, tickets, photos, watches, a car and even his birth certificate could be found there. He called this „a reflection on the hidden relationship between the individual, possessions and identity".

Today, there is a shift in consumption needs and practices, which is reflected in the development of new business models and infrastructure solutions. One symptom of this development is the emergence of rentable storage spaces, which are establishing themselves as a new typology, especially in urban areas. These spatial solutions are not only a result of the growing volume of goods consumed, which requires the creation of additional storage space, but also a reaction to the rising rental prices for residential space in major European cities. The trend towards renting storage space represents a new form of space utilisation that converts existing space used for other purposes into storage space. For investors, this offers flexible, high-priced utilisation with a high profit distribution. This development is part of the broader platform economy, which is based on the linking of physical and digital infrastructures and is supplemented by specialised business models such as those of logistics franchise companies and mail receiving stations.
Storage spaces therefore benefit above all from today's increased mobility. But also from changing lifestyles and biographical incisions, such as relocations and homelessness. However, an automated mail receiving station can also be helpful for online orders so that parcels can be collected outside of opening hours. It turns out that countries in Europe where residents move most often tend to have the highest amount of self-storage space. According to estimates, people in the western world now own an average of 10,000 items. Despite the trend towards minimalism, which is being promoted in design magazines. Even what used to be used as storage space, such as attics, is now being converted into living space. Flats are tending to become smaller and more expensive, offering less space for higher rents. The phenomenon is exacerbated by fixed-term tenancy agreements, making frequent moves necessary.

Capitalism creates lifestyles that harmonise with consumption and also offers justifications for it, as described by Boltanski and Chiapello in 'Le Nouvel Esprit du Capitalisme'. It is a system that relies on decentralised but closely connected networks that are constantly optimised to achieve efficiency and value creation. The franchise model for urban logistics is a practical example of this trend. It enables the utilisation of warehouse space and logistics networks by providing a platform to manage franchisees that combine both physical infrastructure and digital management in one business model.

This creates an agile and scalable system that allows companies to react quickly to changes in consumer behaviour and delivery logistics.

In this context, storage providers, urban logistics franchises and mail receiving stations represent three specific but interconnected patterns, each representing different specialisations within the platform economy.

The history of self-storage began in the 1960s in the USA, when the need for flexible storage solutions grew with increasing mobility and job insecurity. In the 1990s, this concept also found its place in Germany. This trend was particularly characterised by the newly acquired professional flexibility of the middle class. Frequent relocations, which were necessary within a short space of time, opened up new career opportunities and made independent storage space necessary. The demand for storage space grew not only as a practical solution for storing items, but also as an expression of a lifestyle that was increasingly characterised by flexibility. Self-storage is not only a functional solution to a lack of space, but also reflects social changes. According to ethnologist Petra Beck in her Essey Capitalisme sentimental, it benefits from increased mobility, changing lifestyles and biographical incisions. It is a response to the uncertainties and fragmentation of modern lifestyles and offers a space for transitions and adaptations in an increasingly flexible and unstable living environment.

This is emphasised by the modern capitalism described in the book Le Nouvel Esprit du Capitalisme by Luc Boltanski and Ève Chiapello. According to the authors, it has adopted a flexible and project-based logic that relies heavily on individualisation and adaptability. Self-storage could therefore be seen as a direct product of this desired adaptability, as the move away from longterm commitments towards temporary, customisable solutions reflects the central dynamic of project-based capitalism. This dynamic also explains the social significance of storage compartments: they are not only places of physical but also psychological transition, where things that are part of a past or desired life plan are stored.

If we now talk about the second aspect of the self-storage argument, namely the lack of space in our own four walls, the question quickly arises as to whether we have too little space or actually too many things. After all, living space per inhabitant in Central Europe has not decreased, but our consumption and possessions have increased enormously. The storage space removed from our own homes and the ability to store unsightly things out of sight fits in well with a time that preaches minimalism but at the same time con-sumes without restraint. Emptiness has long since become a sign of luxury. However, this does not usually mean that people who live in empty flats own less, it just means that the unwanted things can be well hidden. The price per square metre for a storage unit is so high compared to living space that renting one is not financially possible for many people. This makes it more of a luxury item than a cost-effective extension of living space. But why don't we want to have the things we consume around us, why do we out-source them?

According to Michael Faucault, our consumer products are not commodities, but are marketed as symbols of personal identity and social belonging. This leads to a constant circulation of things that are often acquired through social and psychological incentives rather than actual need. Things that we don't actually need, but that we still want, are therefore outsourced, because the guilty conscience would be too great to dispose of

them straight away. You could still use them, you could still become the person you wanted to be with this product.

For some time now, most medium-sized and larger towns in Central Europe have been noticing a significant vacancy of ground floor uses such as pubs and shops in their streets. This vacancy first became a breeding ground for underground car park entrances, and now increasingly for selfstorage providers. Existing windows of these spaces are covered with colourful advertising film to prevent people from looking in from outside. In some extremely busy squares and prominent city locations, they are increasingly blocking the view into what is actually a semi-public area of a street. In Vienna, these providers are particularly concentrated in the suburban districts. In the first district, the historic city centre, such facilities are less common. In some cases, even former ground floor flats have been converted into this type of usable space.
This leads to a curious situation that seems paradoxical at first glance: on the one hand, self-storage facilities offer a solution to the increasing lack of space in urban neighbourhoods by creatingadditional storage space. On the other hand, they themselves contribute to the cause of this problem by blocking valuable space that could be used for housing or retail for storage purposes. From a legal perspective, there are only a few hurdles that stand in the way of using ground floor space for storage. In residential areas in particular, only minimum fire safety requirements need to be met and it must be ensured that the storage areas do not cause any unreasonable noise nuisance.

The increasing proliferation of self-storage spaces is causing greater problems for the 'urban parterre' named by Angelika Psenner than it appears at first glance. The sealing of surfaces and the loss of window fronts reduce the attractiveness and vitality of these areas. Instead of diversely utilised ground floor areas that enrich the urban space, monotonous, closed façades are created that make social interaction more difficult and detract from the characteristic cityscape. In Vienna in particular, the so-called 'Gewölbe', comparable to the Italian 'botteghe', plays a culturally and historically significant role as a semi-public zone on and in front of the ground floor.
This is reflected in artistically designed signs and wooden constructions in front of shop windows. Letting to self-storage companies appears to be a short-term solution to the vacancy of the 'StadtParterres', but exacerbates the problem in the long term. Coherent ground floor zones are destroyed and their transparency is lost. One solution proposed by Angelika Psenner would be to designate the city parterre as a semi-public zone in development and zoning plans in order to consistently exclude its use for storage or garages.

The Storebox shops shown in the following photos and plans are intended to illustrate the arguments outlined above. Five different locations were chosen to show how flexible and comprehensive the Storebox system is. The location at Meiselstraße 8 is an example of how a Storebox shop can be located in a busy and frequented area. In contrast, the premises at Reindorfgasse 8 are barely noticeable to passers-by, as you first have to enter a rear courtyard to find a similarly discreet door. Margaretenstraße 81 is an example of a location in a historic building, where the discreet and unobtrusive foiling was probably chosen in response to the advice of the conservation authorities. This contrasts with the extremely conspicuous wrapping at Schönbrunnerstrasse 63, which covers almost an entire block of houses. The last example in Sechshauserstraße 98a shows the conversion of a former corner shop, which originally certainly contributed to the lively cityscape, but now appears uninteresting and closed off in the urban space.

For companies like Storebox, the digital system is a central part of how the company operates and enables efficient management and utilisation of storage space.
Users can select, book and pay for storage space via the website or a mobile app. The entire process, from booking to contract cancellation, is handled digitally and therefore requires no direct contact with a landlord or property manager. Only customer service is available via the digital platform, where enquiries and problems can be reported and processed. After booking, users receive digital access keys that are stored in the app and enable keyless access to the storage space. Access is via the app or by entering a code and is possible around the clock. The locations are equipped with surveillance cameras, motion detectors and alarm systems. The digital platform records usage data in order to analyse the availability and utilisation of the storage space and adjust it if necessary. This data makes it possible to react flexibly to demand at specific locations and to integrate vacant properties into the system in a targeted manner. As a result, there are often avoidably unseen clusters of several Storebox shops in one street, whereas in some cases entire neighbourhoods are without storage space.
Another reason for the company's rapid expansion is the franchise system, which enables external partners to operate locations under the Storebox brand. Franchisees sign a contract with Storebox that gives them the right to open and manage self-storage spaces in urban areas. Storebox provides the entire digital infrastructure, including the booking platform and access systems, and supports the partners in the selection of suitable properties and the market launch. Franchisees are responsible for operations, but must meet Storebox's quality standards.
The business model is based on two decisive factors: proximity to the users and the possibility of ground-level access to the storage areas. This concept is extremely profitable for operators, as storage space can be rented out at a significantly higher price per square metre than conventional premises or commercial space.

Another aspect of the self-storage phenomenon is the high number of business customers - around a third of users. Online retailers in particular use self-storage to temporarily store their goods and to be able to react flexibly to market changes. For many companies, it is a cost-effective way of providing storage space for seasonal fluc- tuations or fast deliveries. However, it is primarily private customers who make up the largest share, at around two thirds. For these people, it is often not just a short-term solution for superfluous clutter, but also an emotional way of dealing
with their own possessions. In many cases, it's about delaying the final decision about where things should go - a kind of 'waiting' for a better solution or another moment of clarity. In her article Places of Discretion, Petra Beck describes the specific spatial atmosphere of self-storage facilities. These places are characterised by silence and anonymity and serve as transitional spaces in which decisions can be postponed and phases of life can be bridged. They are characterised by discretion and the absence of public attention, which makes them places of uncertainty, but also of temporary relief. Petra Beck was particularly struck by the monotonous rhythm and the
cool, sterile textures that represent the home of things that are sometimes so personal. The compartments have neither light nor electricity, they are clearly not there to func- tion as recreation rooms or to allow a longer stay than absolutely necessary. They exude the feeling of 'Nicht-Orte' which ethnologist Marc Auge describes as places that have no deeper social or cultural meaning for the people who use them. A 'Nicht-Ort' serves purely functional purposes and does not promote lasting social relationships.
The corridors between the storage areas radiate an oppressive feeling of loneliness,

which even the music from the loudspeakers cannot drown out.
You rarely meet your 'neighbours', and when you do, the contents of your own compartment remain a well-kept secret. The video surveillance in the corridors also contributes to the strange feeling ofbeing watched and yet feeling alone. Not even the operator himself knows what exactly is behind the closed corrugated metal doors. Unlike a haulage company, where inventory lists are kept, all secrets remain hidden here. The compartments are locked with the users' own locks, as the operator only has access in the event of imminent danger. It is therefore an interplay between trust and mistrust between operators and users, which can be expressed well with the quote from Gaston Bachelard in his Poetics of Space: 'There will always be many more things in a closed box than in an open box'.

One possible solution could be to turn warehouses and stores back into the communicative places they often were in the past. Until the 19th century, warehouses were not only used to store goods or personal belongings, but also as meeting places for trade and community. In the countryside, barns and warehouses were places where neighbours came together to help with the harvest or to realise projects together. In urban areas, warehouses were part of larger trading networks where traders, craftsmen and labourers came into contact with each other. The question is whether elements of this original, communal use could be integrated into modern, often anonymous self-storage systems. Many of these facilities are already located in busy locations and are spread across the city, creating ideal conditions for transforming parts of the spaces into places of encounter and exchange. An example from another environment shows the potential: school corridors with lockers, which are often among the most communicative places in a school building. Why couldn't a visit to a self-storage compartment also become an opportunity to meet people and encourage social interaction? Such an approach would not only enhance functionality, but could also be an innovative marketing strategy that offers users a positive experience.

Internet sources:
https://www.bbc.com/culture/article/20160713-michael-landy-the-man-who-destroyed-allhis-belongings
https://www.yourstorebox.com

Literature:
Augé, Marc. Nicht-Orte: Einführung in eine Ethnologie der Umlaufbahnen. Übersetzt von Christiane S. Hohmann. Frankfurt am Main: Suhrkamp, 1995.
Bachelard, Gaston. Poetik des Raumes. Übersetzt von Heide Ziegler. Frankfurt am Main: Suhrkamp, 1958.
Boltanski, Luc, und Chiapello, Ève. Le Nouvel Esprit du Capitalisme. Paris: Gallimard, 1999.
Foucault, Michel. Homo Economicus: Die Geburt des neoliberalen Subjekts. Aus dem Französischen von Daniel Steuer. Berlin: Suhrkamp, 2021.
Psenner, Angelika. Funktionen des "Ebenerds" – "StadtParterre" reloaded. In: Österreichische Gesellschaft
für Architektur (ÖGFA), Basel, 2017.
Simmel, Georg. Die Großstädte und das Geistesleben. In: Gesammelte Aufsätze zur Soziologie und Sozialpsychologie. Leipzig: Duncker & Humblot, 1903.
Wien Museum (Hrsg.). Wo Dinge wohnen: Eine Ausstellung des Wien Museums. Herausgegeben von Sabine Haag und Peter Weibel. Zürich: Park Books, 2019. .

MIA GILLITZER

Storebox

fig. 1 Storeboxes in the blackplan, drawing: Mia Gillitzer, 2025
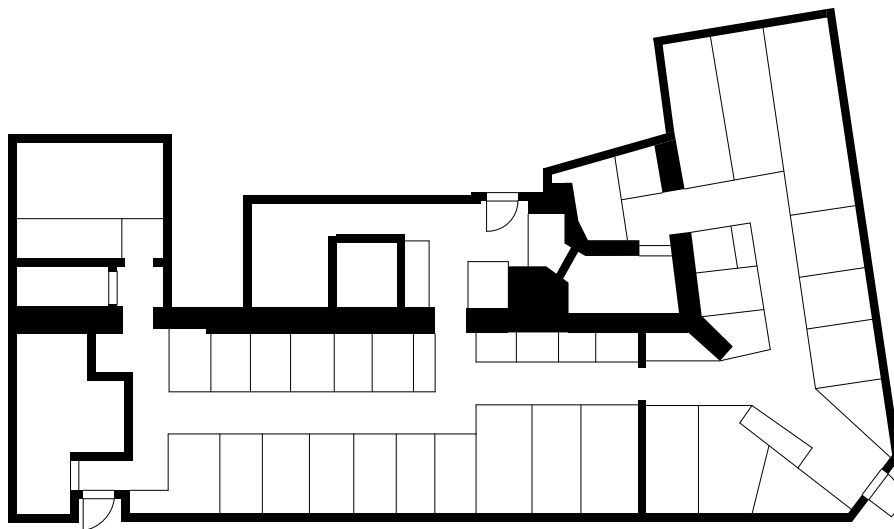
fig. 2 Floorplan, drawing: Mia Gillitzer, 2025

fig. 3 Meiselstraße 8, photo: Mia Gillitzer, 2025

fig. 4 Meiselstraße 8 , drawing: Mia Gillitzer, 2025

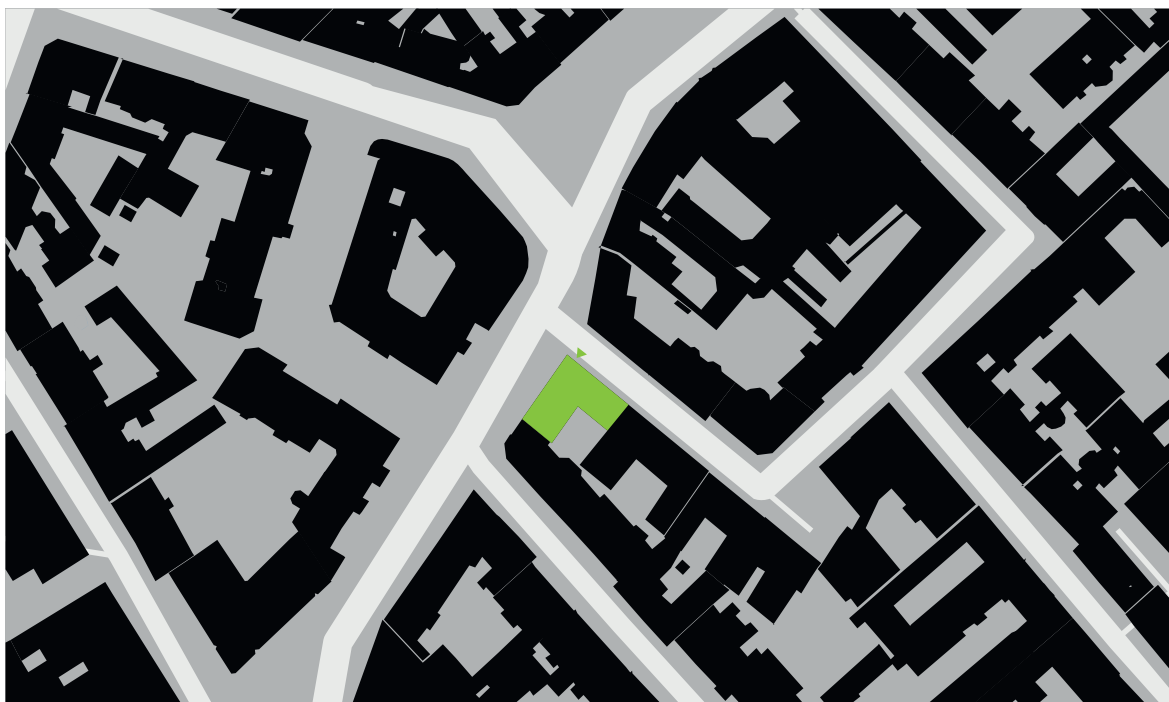fig. 5 Margaretenstraße 81, photo: Mia Gillitzer

fig. 6 Margaretenstraße 81 drawing: Mia Gillitzer, 2025
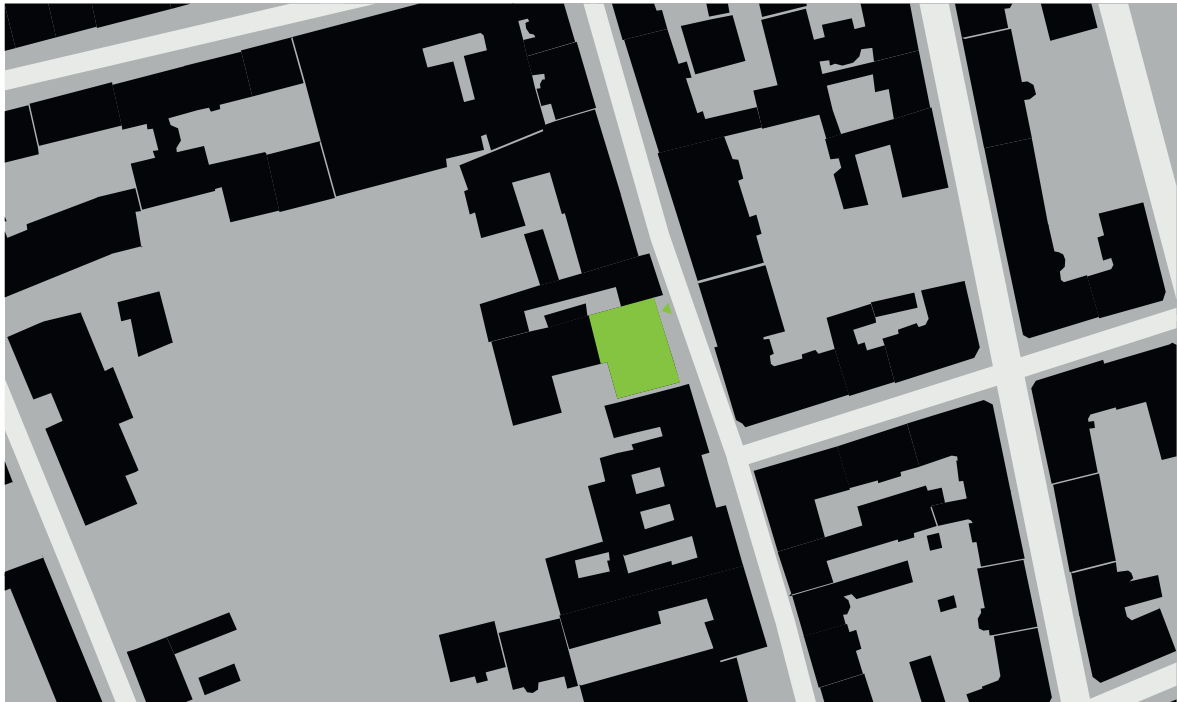
fig. 7 Reindorfgasse 29, photo: Mia Gillitzer, 2025

fig. 8 Reindorfgasse 29, drawing: Mia Gillitzer, 2025

fig. 9 Schönbrunnerstraße 63, photo: Mia Gillitzer, 2025
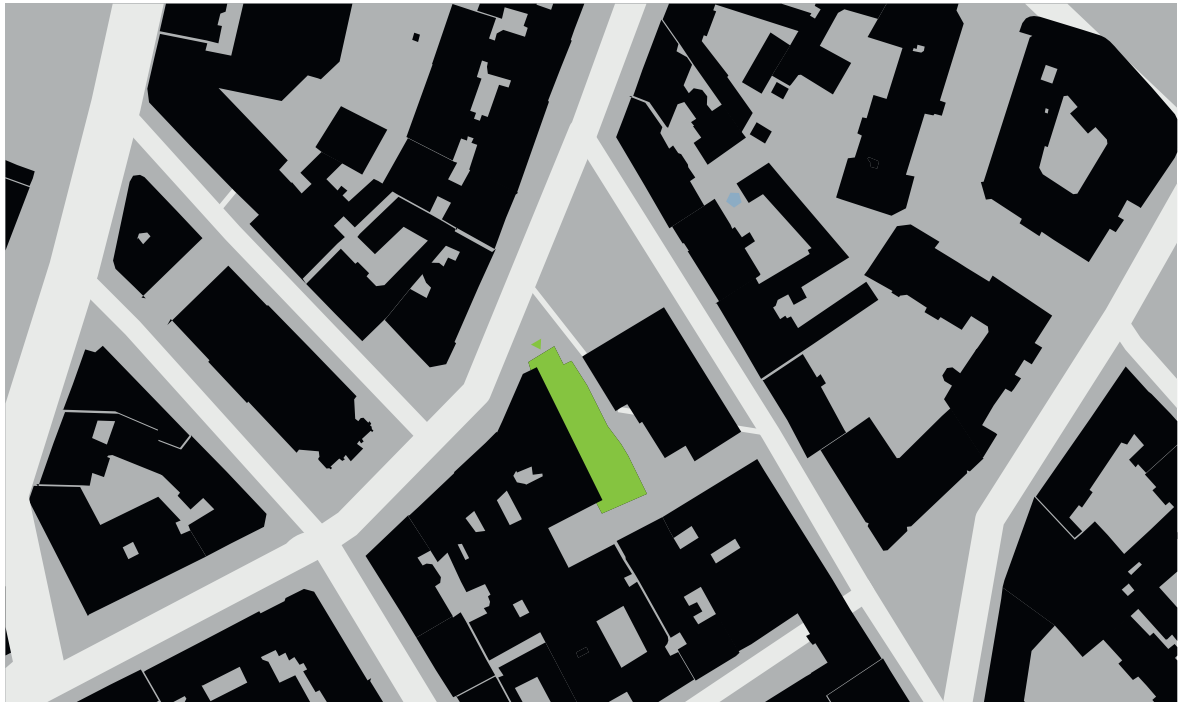
fig. 10 Schönbrunnerstraße 63, drawing: Mia Gillitzer, 2025

fig. 11 Sechshauserstraße 98a, photo: Mia Gillitzer, 2025
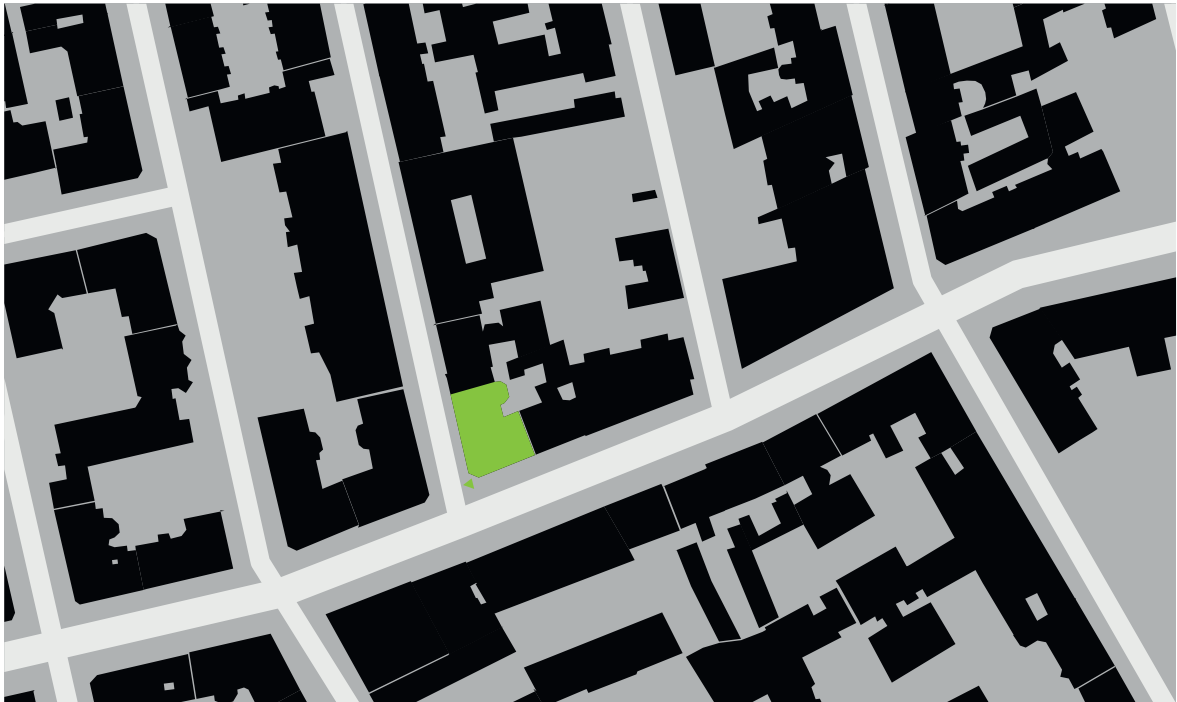
fig. 12 Sechshauserstraße 98a, drawing: Mia Gillitzer, 2025

FLORIAN RÖDEL

Parcel station

Parcel stations are appearing in cities everywhere, offering a convenient solution to e-commerce demands and are a visible, physical sign of plattform economy.
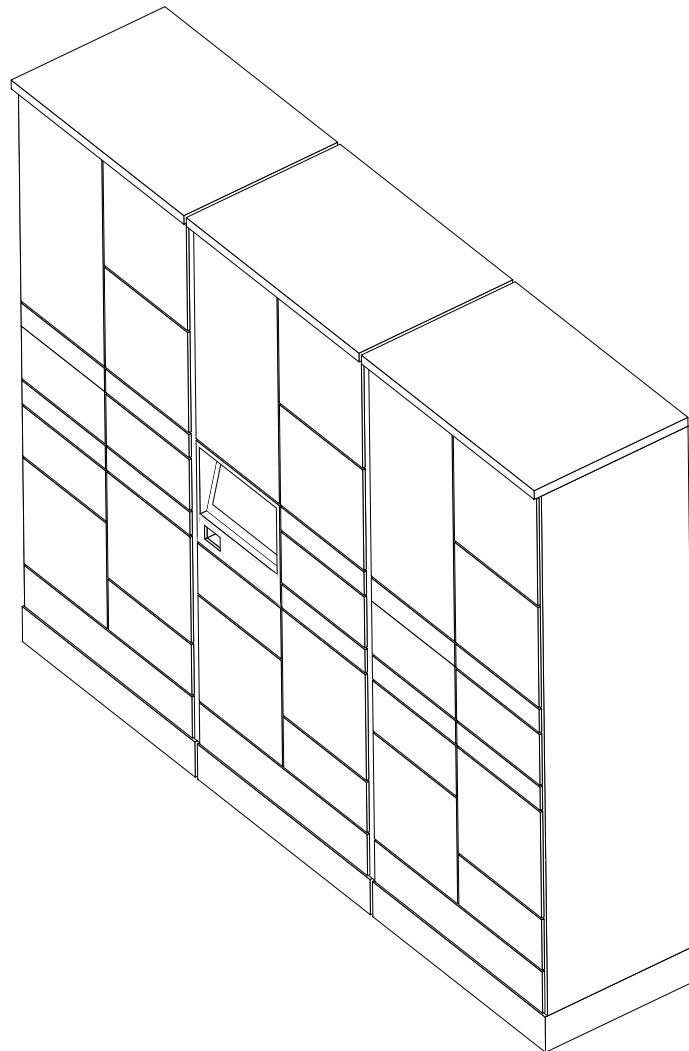
Parcel station

Where would we be without the things we own?
The artist Michael Landy asked himself this question in 2001 and counted all his possessions, resulting in 7,272 objects. He then exhibited every single item in a gallery space, where all the pieces were placed on a conveyor belt and broken down into their individual parts by employees. Books, kitchen utensils, CDS, tickets, photos, watches, a car and even his birth certificate could be found there. He called this 'a reflection on the hidden relationship between the individual, possessions and identity.
Today, there is a shift in consumption needs and practices, which is reflected in the development of new business models and infrastructure solutions. One symptom of this development is the emergence of rentable storage spaces, which are establishing themselves as a new typology, especially in urban areas. These spatial solutions are not only a result of the growing volume of goods consumed, which requires the creation of additional storage space, but also a reaction to the rising rental prices for residential space in major European cities. The trend towards renting storage space represents a new form of space utilisation that converts existing space used for other purposes into storage space. For investors, this offers flexible, high-priced utilisation with a high profit distribution. This development is part of the broader platform economy, which is based on the linking of physical and digital infrastructures and is supplemented by specialised business models such as those of logistics franchise companies and mail receiving stations. Storage spaces therefore benefit above all from today's increased mobility. But also from changing lifestyles and biographical incisions, such as relocations and homelessness. However, an automated mail receiving station can also be helpful for online orders so that parcels can be collected outside of opening hours. It turns out that countries in Europe where residents move most often tend to have the highest amount of self-storage space.
According to estimates, people in the western world now own an average of 10,000 items. Despite the trend towards minimalism, which is being promoted in design magazines. Even what used to be used as storage space, such as attics, is now being converted into living space. Flats are tending to become smaller and more expensive, offering less space for higher rents. The phenomenon is exacerbated by fixed-term tenancy agreements, making frequent moves necessary.
Capitalism creates lifestyles that harmonise with consumption and also offers justifications for it, as described by Boltanski and Chiapello in 'Le Nouvel Esprit du Capitalisme'. It is a system that relies on decentralised but closely connected networks that are constantly optimised to achieve efficiency and value creation. The franchise model for urban logistics is a practical example of this trend. It enables the utilisation of warehouse space and logistics networks by providing a platform to manage franchisees that combine both physical infrastructure and digital management in one business model. This creates an agile and scalable system that allows companies to react quickly to changes in consumer behaviour and delivery logistics.

In this context, storage providers, urban logistics franchises and automated parcel stations represent three specific but interconnected patterns, each representing different specialisations within the platform economy.

Problem

In the 21st century, traditional mail delivery faces numerous challenges. Alongside the rapid growth of online commerce, changing lifestyles, and rising customer expectations, the liberalization of the postal market and the resulting competitive pressure have fundamentally changed the demands on parcel and letter delivery. In this context, it becomes clear that the traditional structures and processes of mail delivery are reaching their limits.

The biggest challenge is the increasing number of parcel shipments. More and more people are shopping online, which leads to an enormous increase in parcel volume. Delivery services are thus under immense pressure to deliver shipments quickly and efficiently. At the same time, customer expectations of delivery services are increasing. Fast delivery times, flexible delivery options, and transparent shipment tracking are now standard. These increased demands lead to enormous time and cost pressure for delivery services and their employees. Increasing competitive pressure further exacerbates this situation. Price wars and cost-cutting measures mean that delivery services have to keep their prices low, which often has a negative impact on the working conditions of delivery personnel.

However, not only the quantity of shipments poses a challenge, but also the delivery conditions are difficult. In cities, traffic, narrow streets, and difficult-to-access backyards make delivery difficult. Deliverers often have to cover long distances on foot and carry heavy packages into narrow stairwells. Unlike letters, these cannot simply be delivered to the mailbox on the ground floor, but sometimes have to be delivered to the fifth floor directly to the apartment door. This leads to longer delivery times and increases the physical strain on delivery personnel.

Another problem is the lack of flexibility of traditional mail delivery. Post offices have fixed opening hours that are not always compatible with the working hours of recipients. Often, the branches are also not in the immediate vicinity of the recipients, which makes picking up parcels even more difficult. Leaving parcels in front of the door is not a safe option in many cases, especially in apartment buildings or with valuable shipments. The liberalization of the postal market has led to a variety of delivery systems. The Austrian Post still maintains special branches with staffed counters and, in some buildings, also special boxes for receiving parcels. However, these are limited to mail items. The use of these boxes for sending also requires additional steps and in some cases an app. Newer competitors do without their own branches and rely on cooperation with existing businesses, mostly tobacconists or small owner-managed stores. In times of particularly high shipment volumes for Black Friday, Christmas, or similar occasions, additional personnel may be required at short notice, which then becomes obsolete and must therefore be brought in via temporary employment agencies. Classic post offices or cooperations also have opening hours, which limits flexibility. In addition, their network is not necessarily close-meshed and not always in the immediate vicinity of the recipients, which can result in further travel and thus additional traffic volume.

Increasing anonymity in the house poses an additional challenge. In apartment buildings, it is often difficult to determine who the rightful recipient of a package is. In addition, residents know each other personally less and less often, which, in addition to an increased risk of theft and misuse, also increases mistrust and reduces the willingness to accept a package. The return of parcels is another problem. The process is often complicated and time-consuming, which can lead to customer frustration. The challenges mentioned above also arise again when parcels are to be returned. The service of delivering and picking up again may thus become a loss-making business for the retailer, as they have not been able to make a profit. In addition to avoiding this and passing the costs on to customers in the form of shipping costs, reducing costs is a possible way to minimize losses.

In addition to the challenges mentioned, the increasing digitalization of delivery services also raises questions of security and data protection. Where is customer data stored? How secure are the various delivery systems? Who is liable for the loss or damage of shipments? These questions must be reassessed in the context of the liberalization of the postal market and increasing digitalization. Another important aspect is sustainability. Increasing delivery traffic puts a strain on the environment. Exhaust fumes and noise impair the quality of life in cities. In recent years, delivery orders have increasingly been awarded to subcontractors, in some cases creating a chain of passing on to up to five subcontractors. The actual delivery is then carried out by people who bear a high risk of their own, even paying for their own vehicle, clothing, and equipment. The orders often include a certain daily quota of parcels to be delivered. The time for sorting, the actual conditions on site, and the traffic situation are often insufficiently taken into account, which is why the daily quota can rarely be fulfilled within an eight-hour working day. Insufficient breaks and long working days of often 15 hours have thus become established. The introduction of selectable delivery times to meet the increased customer demands for flexibility further complicates the planning of efficient routes for deliverers.

Analysis

The described problems of traditional mail delivery are not only due to digitalization and online commerce. They are also an expression of profound social changes. Social and economic developments are leading to a transformation of cities, these upheavals are in full swing and have received considerable impetus in the years of various crises such as the financial crisis and the Corona pandemic. Although a very current phenomenon in its entirety, the main features of this development have been visible for a long time and cannot be seen as an isolated phenomenon, but as a consequence of various developments:

Platform urbanism describes the increasing fusion of urban life and digital platforms. This process becomes visible through the materialization and land consumption of platform business models in urban space as well as their adaptation. Commercial practices based on technology-driven platforms are spreading in cities and changing them. Examples include delivery services such as Lieferando, ride-hailing services such as Uber, online commerce such as Amazon, and the sharing economy such as the scooter rental company Lime. The first important feature is „smoothness", which is made possible by the use of digital technologies, e.g. through apps, algorithms, and data analysis. Plat-

forms use the information collected, evaluate it, and provide easy and fast access to various services and information, e.g. for ordering goods, booking rides, or searching for accommodation. The second important feature is fast processes: Platforms optimize and accelerate processes, e.g. the delivery of goods, the mediation of rides, or the processing of requests.

This is achieved by networking companies, administrations, and citizens via digital platforms. In doing so, the platforms can develop a parasitic character. Platforms often use existing urban spaces and infrastructures to offer their services. They access the „hardware" of the city without investing significantly in urban development themselves. With all the great promises that these platforms proclaim, the change in the city usually happens without much opportunity for participation and involvement of the residents. One of the central promises of many platform companies is convenience. The increase in delivery traffic is due to this low threshold and supposedly uncomplicated handling of online marketplaces. Instead of choosing and buying something on site, possibly visiting several stores before finding the right thing, it is possible to order something from the sofa or from the subway. Suggestions based on one's own preferences are presented when opening the page, which is usually even cheaper than in stationary retail. Payment is processed securely and quickly via an online payment service provider, if something is wrong with the order, you get your money back. Surplus goods that were only delivered for selection are conveniently returned.

Sadowski speaks of the „tyranny of convenience". He criticizes the „smart" technologies that, under the guise of efficiency and comfort, undermine our autonomy and privacy. Permanent networking and data collection lead to a subtle form of control and manipulation. This includes smart homes, wearables, or even surveillance in public spaces. These technologies collect data about our behavior and preferences to provide us with customized, convenient solutions, but can also be used to influence and control us. An extreme example is social scoring systems in autocratically governed countries like China, where the convenience aspect and freedom of choice for users have almost completely disappeared and control and management are paramount. Online shopping platforms promise comfort and flexibility, but often the package is not delivered at home, it has to be picked up at a nail salon 5km away. In addition, the platforms also contribute to data collection and surveillance.

Foucault analyzes „homo oeconomicus" as a subject who manages himself as a „company" and optimizes his skills and resources. Neoliberalism promotes this „entrepreneurial self-management" and makes it the basis of the social order. In neo-liberalism, the market becomes the central steering instrument. Individuals are encouraged to orient themselves to the market and to shape their lives according to economic principles. For customers, submission to these principles means acting in a more price-conscious manner, which is made much easier by the wide range of products and the ease of comparison on the Internet. Customers decide which shipping provider is the most suitable and have to weigh up what effort receiving the shipment means for them. For service providers, this results in an employment relationship that offers little security and great risks. The entry hurdle is relatively low, an app notifies the service providers where the packages have to be loaded, calculates the optimal route, and informs about changes. The work equipment, i.e. vehicle and clothing, must be paid for by yourself, a higher initial capi-

tal allows for better equipment, a new delivery van is more economical and cheaper to maintain, but also more expensive to purchase. Those who have a lot of capital can buy several delivery vans, become subcontractors themselves, and hire people who have less capital. Those who start with poorer equipment due to low capital are very likely to remain at this point, while subcontractors themselves can push down the pay for employees in order to make more profit. Neoliberal governmentality produces and legitimizes social inequality. Those who fail in competition are held responsible for it themselves. The promise of working independently and easily on one's own terms is not fulfilled here.

Boltanski and Chiapello illuminate this aspect in their work „The New Spirit of Capitalism". Capitalism has taken up the critique of alienation and the suppression of individuality and transformed it into a new form of work organization and motivation. Values such as autonomy, creativity, and flexibility are propagated to bind employees to the system. The „new spirit of capitalism" instrumentalizes the longing for self-realization and freedom to discipline and control the workforce. The integration of critique into capitalism is an ambivalent process. It can lead to improvements, but it also carries the danger of „defusing" the critique and obscuring power structures. Terms such as freedom are hollowed out and reinterpreted until they serve to shift all responsibility onto the individual.

Solution

Parcel receiving stations have a modular design. In principle, the modules consist of individual compartments of different sizes that can be combined as required. Each module has integrated lighting to illuminate the station around the clock. The compartments are usually available in different sizes to accommodate both small parcels and larger packages. There is a basic module, which differs from the expansion modules by a display with touchscreen, a scanner, and a printer. The basic module can be set up alone or in combination with the expansion modules on a simple foundation at almost any location. A photovoltaic module can optionally be connected to supply power for operation. The modular design allows the stations to be adapted to the spatial conditions and flexibly expanded when the parcel volume increases.

Each compartment is equipped with an electronic lock that can be opened by an individual code or a QR code. This code is communicated to the recipient by SMS or e-mail after the parcel has been delivered. Alternatively, the code can also be generated via an app. The electronic locks ensure the security of the parcels and prevent unauthorized access.
The operation of the stations is intuitive and user-friendly. Customers can pick up their parcels quickly and easily by entering the code or scanning the QR code. The stations usually have a touchscreen display that makes operation easier and can display additional information, such as the location of the station or the status of the parcel.
The stations are weatherproof and vandal-proof to allow use in public spaces. They are made of robust materials that can withstand the weather and protect against damage. Additional security features, such as surveillance cameras, can be integrated to further increase the security of the parcels.

The stations often offer additional functions that increase convenience and flexibility for users:

Shipment tracking: Customers can track the status of their parcels online or via the app.
Returns: The stations can also be used for returning parcels.
Refrigerated compartments: Refrigerated compartments can be integrated for temperature-sensitive goods such as food.
Accessibility:The stations are barrier-free to allow all users to use them.

The parcel receiving stations can be integrated into the IT infrastructure of the delivery services and the city. They can be connected to various software systems and enable seamless communication between the various actors in the supply chain. The data generated can be used to optimize logistics processes and improve service quality.

Receiving stations built according to this principle are operated by different providers with sometimes different business models. One group is shipping companies such as DHL, Post or UPS which make the stations available exclusively for their shipments. Some of these are also available in existing branches as a 24/7 extension of the offer. However, the majority of the stations are located in residential areas and in easily accessible public places, sometimes also within large residential complexes.
E - commerce platforms such as Amazon or Aliexpress operate their own packing stations in order to be able to handle their goods traffic exclusively themselves. This is an extension of the offer of the large trading platforms, which has been under construction for years, which are increasingly relying on their own shipping routes with infrastructure specially developed for their needs, right up to vehicles, in order to be more independent of shipping service providers.

In addition, there are providers such as my Flex Box who specialize purely in parcel stations, which can be used by other companies, but are generally open to all users. My Flexbox relies on cooperation partners such as housing developers, petrol stations, municipalities, trading companies and shipping service providers who want to expand their own network.
The choice of location can be optimally determined for established providers such as mail order companies and shipping service providers on the basis of their collected data, and the demand at a location can also be analyzed in advance and the modular stations can be erected in the appropriate size.
Parcel receiving stations enable secure and flexible delivery of parcels and short term storage of variouse goods, regardless of the presence of the recipient. This reduces the number of unsuccessful deliveries and the associated effort for deliverers and customers. Instead of having to make several delivery attempts at different addresses, deliverers can drop off the parcels bundled at a central location. This saves time and enables more efficient route planning. Customers benefit from the ability to pick up their parcels around the clock, regardless of the opening hours of post offices or shops. This flexibility increases the comfort and satisfaction of recipients.

By bundling parcels at central collection points, the number of delivery vehicles in cities can be reduced. This contributes to relieving the strain on the transport infrastructure and reducing traffic jams and emissions. In addition, parcel receiving stations can be used in combination with bicycle or pedestrian delivery, which further reduces environmental impact and promotes sustainability in urban areas.

More efficient delivery and the avoidance of misdeliveries through parcel receiving stations reduce the time pressure for deliverers. In addition, the physical strain is reduced, as fewer heavy parcels have to be carried into narrow stairwells. This can contribute to improving working conditions in the delivery industry.

Parcel receiving stations can be seamlessly integrated into the city's digital infrastructure and can be linked to other smart city applications. The data generated by the stations (e.g. frequency of use, pick-up times) can be used to optimize urban logistics, for example for planning locations and adapting capacities. This enables data-based and efficient control of urban logistics.

Parcel receiving stations can serve as a platform for additional services, e.g. for accepting returns, picking up dry cleaning or providing information. Integrating parcel receiving stations into local shops can increase customer frequency and strengthen the local economy by offering shops new opportunities to generate revenue and retain customers.

Parcel station
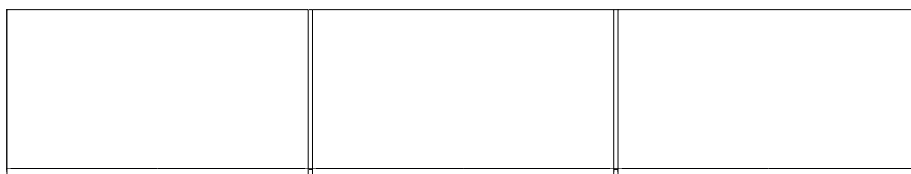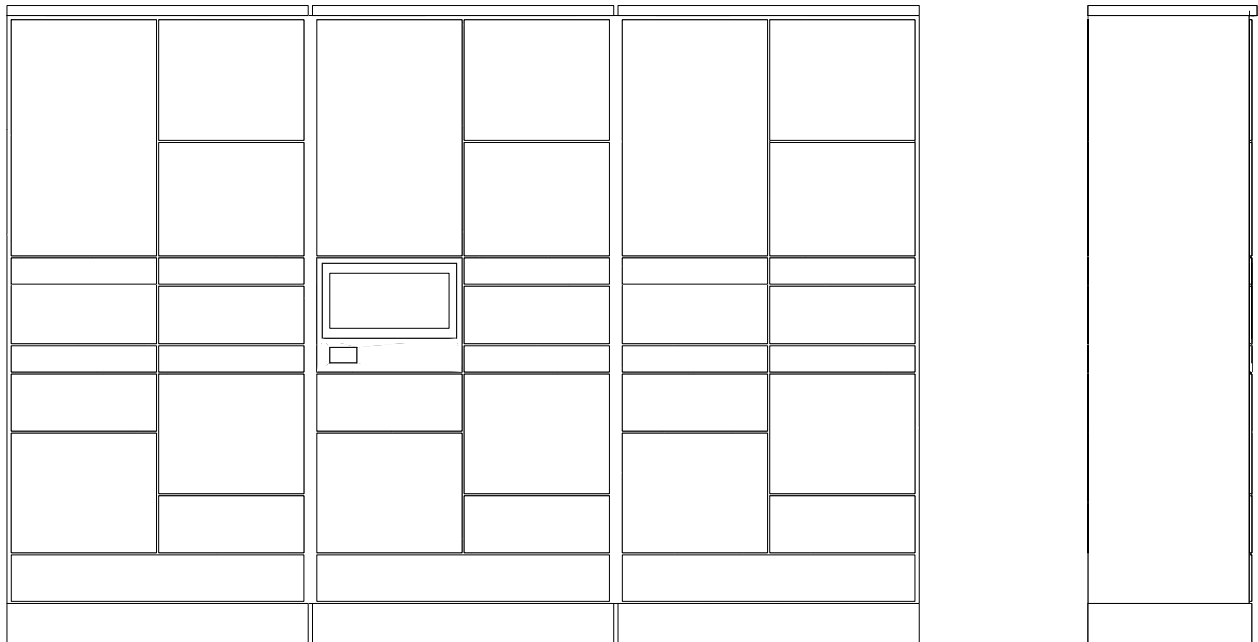
fig. 1 Drawing of parcel delivery station
drawing: Florian Rödel, 2025

0cm　　50cm　　100cm

fig. 3 My flex box with food compartments
Vienna, photo: myflexbox

fig. 4 amazon locker
photo: KEBA

fig. 5 DHL „Packstation"
photo: krautreporter

Parcel station

https://wien.orf.at/stories/3233438/
https://www.derstandard.at/story/3000000199025/wo-ist-mein-paket-ueber-die-pre-kaere-situation-der-zusteller-und-den-frust-wartender-kunden
https://www.keba.com/de/logistics-solutions/paketstationen-und-services/
https://www.rnd.de/wirtschaft/die-neue-filiale-ist-ein-automat-die-post-setzt-im-mer-staerker-auf-stationen-BSB7MKNU4JLOHBLDM4Q7KQGADU.html
https://www.myflexbox.com/de-at/standortpartner/handelsunternehmen/
https://www.kleinezeitung.at/wirtschaft/19239444/post-befoerderte-2024-eine-hal-be-milliarde-pakete-in-elf-laendern

SUSANNE GERZER

IKEA Kallax shelf

The KALLAX shelving is one of IKEA's bestsellers. The modular systemmakes it very easy to adapt to individual requirements. It is very affordableand has a simple and timeless design and is used in a variety of scenarios.
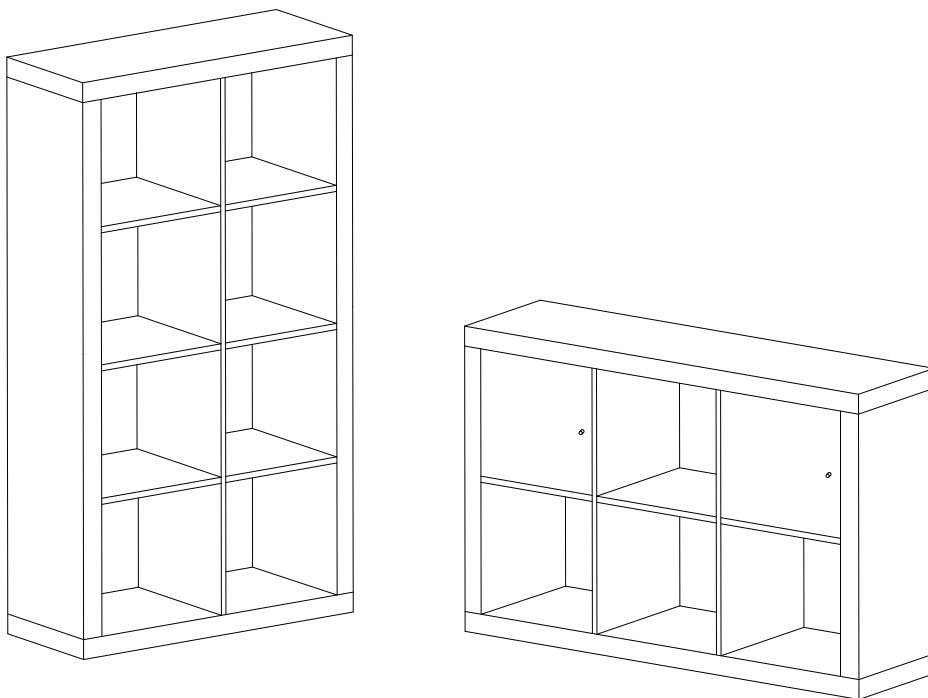
IKEA Kallax shelf

Access and affordability of furniture

For a long time, the furnishing of apartments and houses was heavily dependent on available financial resources. Furniture was expensive, which is why people often limited their purchases to the bare essentials and used what they bought for a long time or passed it on.
Shelving systems in particular were often complex and rigid to assemble. Large cabinets or display cabinets made of high-quality solid wood or metal, which had to be specially assembled and installed by craftsmen, were often very expensive and therefore not very affordable for many people.

One of the first brands to make furniture accessible to the masses was Thonet. Chair no. 14, later also known as the "coffee house chair", was introduced in 1859 and could be easily disassembled into its individual parts and shipped. It was sold millions of times and is still a well-known design classic today.

IKEA was founded in Sweden in 1943 by Ingvar Kamprad. The now global furniture store achieved its breakthrough with the introduction of the "flat pack system", i.e. disassembled furniture in flat boxes for easier transportation and self-assembly. This reduced storage and shipping costs, which in turn kept the purchase price very low and offered the customer a stable shelving system at a fraction of the actual price of custom-made shelving. IKEA managed to produce inexpensive yet modern and high-quality furniture in Scandinavian design. The use of chipboard, fiberboard and paper filling as materials ensures a light but stable piece of furniture and at the same time further reduces manufacturing costs.

Versatility

A common problem in homes is the need for versatile furniture that can be flexibly adapted to the available space and various functions. Furniture that is compact yet functional is particularly in demand in small rooms.
The KALLAX shelf design by Tord Björklund for IKEA offers extreme modularity and flexibility.
It isavailable in a variety of sizes and configurations, including variants such as 2×2, 4×4 or 5×5.
The shelf can be used upright or horizontally, depending on your needs. This results in an extremely wide range of possible uses, as the shelf can be used for almost anything, such as classically as a bookcase, as storage space for documents, as a TV sideboard, as a room divider, as a storage unit for toys or as decoration and display space in shop windows. The square surfaces, with an approximate size of 33×33cm, are suitable for books, baskets, plants or any decorative elements.
Themodular structure and the various size options

fig. 1 „flat pack system", photo: google pictures, 2024

fig. 2 chipboard, photo: google pictures, 2024

fig. 3 KALLAX in use, photo: Kleinanzeigen, 2024

fig. 4 KALLAX in use, photo: Kleinanzeigen, 2024

Customization

Most shelving and storage systems offer little opportunity for personalization or adaptation as needs change. These customization options are becoming more and more popular and users increasingly want to design their furniture according to their own taste or needs, for example with closed compartments, additional drawers or matching colors.
A variety of inserts can be added to the otherwise open KALLAX shelving structure as required.
Insertssuch as doors, drawers or fabric boxes in different colors, such as the popular DRÖNA boxes.
There is a flexible choice between open and closed compartments, depending on requirements.
In addition, the open design also enables numerous do-it-yourself projects where users can contribute their own creative ideas and thus individually design their living space.Individual parts of the shelving unit can be replaced or added to relatively easily thanks to its modularity.
KALLAX shelving is known for its simple but functional design, which takes into account the practical requirements of users as well as economic and spatial considerations. It solves problems of complexity, cost and lack of flexibility long associated with traditional shelving systems.
The shelf is a symbolic embodiment of a certain lifestyle. Whether as a room divider in a shared room or as a storage shelf in a pottery workshop, as one of IKEA's bestsellers, the KALLAX stands for modern consumer behavior and is even one of the most popular on second-hand platforms such as WILL HABEN.

Consumer culture

The KALLAX shelf is symbolic of a product that is tailored to economic rationality and market logic. It is the solution for the "rational consumer" who prefers efficient, cost-effective and versatile products. In consumer culture, the buyer becomes an "economic subject" who bases his actions on efficiency, optimization and practicality.

"The neoliberal model no longer sees people as citizens, but as entrepreneurs of themselves." (Foucault)

Consumers are suggested an individual choice of consumption. A choice of affordable, practical and functional yet timeless furniture that fills their rooms as efficiently and usefully as possible. Ultimately, however, this choice is strongly influenced by market mechanisms and aesthetic standards. For example, the IKEA catalog and the furniture store itself already provide furniture design patterns in their sales areas, in which rooms are shown ready to live in. Consumer behaviour can thus become standardized by repeatedly presenting buyers with examples of how to expand or improve their furnishings instead of encouraging individual creativity. Consumers are encouraged to continue shopping, especially through the many additional individual parts such as doors or other shelf inserts. This illustrates the mechanism described by Foucault. Consumers are subtly guided not only to buy, but also to regularly adapt and expand.

"Homo Oeconomicus" describes man as an actor who is brought to self-regulation by the market.

fig. 5 KALLAX in use, photo: Kleinanzeigen, 2024

fig. 6 KALLAX in use, photo: Kleinanzeigen, 2024

Three Ecologies

The KALLAX shelf can be used to examine the complex relationships between the environment, social structures and mental subjectivity in the context of consumer behavior and lifestyle.

Environmental ecology deals with the relationship between nature and people, sustainable resource consumption and environmentally friendly production processes. The KALLAX shelf is an example of a product that relies on global supply chains and mass production. Although IKEA advertises sustainable practices, it continues to rely increasingly on cheap industrial raw materials. The use of cheap materials does not guarantee a long service life, promotes "fast furniture" consumption and thus contributes to a high consumption of resources.

"Our relationship with the environment is increasingly functionalized by capitalist mechanisms and leads to ecological damage." (Guattari)

Social ecology encompasses social relationships and communal living as well as associated cultural norms. The flexible KALLAX shelving unit is designed for a wide range of requirements and needs and thus offers an optimal shelving solution for many people. As a result, the shelf can be found in many scenarios and living spaces and at the same time contributes to a standardization and unification of modern living spaces and subsequently to a conformist living culture. "Individuals are captured by media images, consumption patterns and cultural models and adopt prefabricated lifestyles." (Guattari)

Mental ecology refers to individual subjectivity and the way in which people perceive and shape their identity. Mass products pose a danger as they reproduce media narratives and reduce the individuality of subjects.

The KALLAX shelf as an object is such a mass product, a recurring structure that imposes a certain idea of functionality, order and aesthetics on consumers. As with social ecology, there is a risk of losing the individual creativity of the subject. The internalized aesthetic norms make people act like marionettes, making buying impulses and creating copies of living room pictures down to the smallest detail.

"It's about breaking out of the passive role of the consumer and creating spaces for new subjective forms of expression." (Guattari)

Resingularization

Guattari would probably see the KALLAX shelf as an example of the success of consumer culture influenced by mass media. The shelf is modular, uniform and adapts perfectly to the standardized "aesthetic environment" of modern homes as presented in interior design magazines or on social media. It stands for the standardization of individual living spaces and mental individual concepts that are pushed aside by capitalist standards.
Guattari argues that capitalist systems homogenize individual and cultural diversity.

"Capitalism not only erodes social structures, but also influences mental-ecological processes by promoting aesthetic and cultural conformity." (Guattari)

The KALLAX shelf is a good example of a standardized consumer object that, through its supposed modularity, pretends creative and individual participation in the process, but ultimately promotes a mental passivity of the subjects. Instead of creatively designing the space themselves and coming up with solutions, consumers are given a pre-planned example scenario that shapes individual taste and subjectivity in the long term.
Guattari demands that individuals break away from these prefabricated patterns and strive for a "resingularization".

"Individuals must restore their own existential space through creative acts." (Guattari)
Individuals should therefore reclaim the "existential space" in a process by withdrawing from the homogeneous mass-produced offers.

"Individuals are surrounded by ideas, tastes and models that invade their subjectivity and uniformize them. It is important to create spaces for individual differences and to express this diversity creatively." (Guattari)

Applied to the KALLAX shelf, this would mean counteracting the predetermined design and actively redesigning it in order to break away from mass aesthetics. Resingularization here means destabilizing the standardized space through spontaneous and improvised changes.
One approach here would be do-it-yourself projects. Precisely because IKEA furniture is so inexpensive and simple in design, the furniture is often used as the basis for individual redesigns. For example, doors can easily be replaced with other colors or new structures or haptics, shelves can be artistically painted or extended with motifs. Completely new pieces of furniture can also be put together.

With reference to Guattari's concept of "social ecology" and the social element of resingularization, community conversion projects could be organized in which friends or neighbors come together to build new modular forms from their shelves. KALLAX Reagle could also serve as a primer to create interactive art installations through group projects.

Many successful DIY projects are filmed and posted online on social media for people to watch and copy. Ideas for alternative uses are shared and made available to interested parties in a large creative network. On the one hand, this responds to Guattari's call for "social subjectivity", and on the other, it creates another media image. Former individual approaches are once again being utilized to create homogeneous lifestyles. A new problem of mass consumption is created, in which a supposedly creative do-it-yourself project contributes to the further promotion of consumption. Ultimately, it doesn't matter whether mental passivity is triggered by an interior design magazine or a DIY video on Instagram. In both cases, consumption is ultimately encouraged, an individual creative process is suggested, which however continues to feed the mass aesthetic without being aware of the actual problem of wasting resources.

However, resingularization could also mean conserving resources and extending the life of the shelf by repairing broken modules and converting them into new functions. This practice therefore fits in with Ostrom's principles of collective, sustainable resource use.

"Communities can create models of resource use that are more effective and sustainable than market-driven solutions." (Ostrom)

fig. 7 KALLAX DIY project, photo:

fig. 8 KALLAX DIY project, photo: Pinterest, 2024

Decentralization and resource minimization

The KALLAX shelf is a product of a global capitalist system. This system, like almost all capitalist systems, is based on the use of common resources such as water, energy and wood. Does IKEA as a private company act sustainably with resources or would there be alternatives such as cooperative production methods or local community models for manufacturing the products. The point here is to relinquish centralized control and develop alternative models for the distribution of resources as a community. Ostrom rejects the idea that either state regulation or pure market control are the best solutions.

"Neither the state nor the market is necessarily successful in sustainably managing shared resources." (Ostrom)

From a commons perspective, the KALLAX shelf can be criticized as a product that has been created at the expense of common resources such as wood and labor, and whose use relies on anonymous mass production rather than local and sustainable models. Mass production consumes an enormous amount of resources, especially if the products are not durable, due to cheap and low-quality materials, as is often the case with IKEA. The aim here should be to establish collaborative models, for example to jointly produce furniture made from sustainable materials with the help of local initiatives in order to minimize the consumption of resources.

Platform capitalism

For a long time, IKEA was known as a classic furniture store. Today, the company is a global corporation that analyzes and makes strategic decisions. Platform companies such as Aamazon or Google create digital ecosystems by linking different services and products. IKEA is pursuing a similar approach by increasingly supplementing its furniture ranges with digital services and additional products.
For example, IKEA offers smart furniture. Tables with wireless chargers or smart lighting systemsthrough the cooperation with Philips Hue. With the acquisition of Task Rabbit, IKEA offers a service for arranging furniture assembly services, which is similar to a platform structure in which external service providers become part of the IKEA construct.The company no longer just offers furniture, but a wide range of digital tools, services and complementaryproducts.

IKEA collects data on the use of apps and digital services in order to be able to offer personalized advertising and offers. This allows purchasing behavior to be analyzed and further processed.Individual purchasing decisions can thus be guided and the product range can be adapted to customers' needs.

Products such as the KALLAX shelving unit are designed in such a way that users can assemble and install them themselves. This transfers responsibility to customers, shifts costs and enables more efficient production at the same time. IKEA thus reduces structures by outsourcing essential services such as assembly, transportation and storage. In order to be able to offer customers a certain level of service, IKEA relies on the purchase of Task Rabbit. External workers take over the assembly instead of having to employ their own assembly staff.
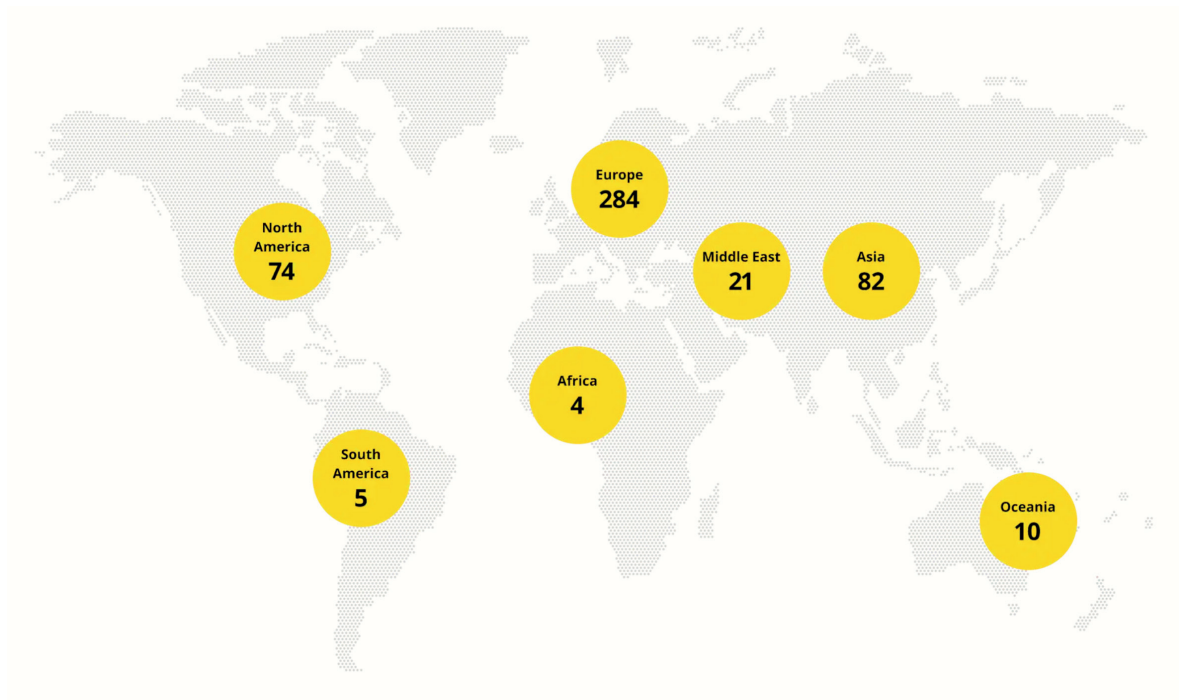
fig. 9 480 IKEA stores in 63 markets (Updated: 12.2024) graphic: IKEA Homepage, 2024

fig. 10 IKEA X adidas collaboration ad, photo: GQ Magazin, 2018

Platforms are characterized by the fact that they benefit from network effects. The more users, the more valuable the platform becomes.
IKEA is a globally successful company. The blue furniture store with the typeface is known worldwide. Not only the name IKEA but also a number of designs, such as the KALLAX design, are well-known and are now traded not only new but also second-hand. The Scandinavian design is stylish and at the same time simply classic and appeals to a wide range of people across cultures and countries. IKEA has a large customer network and tries to bind customers to the company in the long term, for example through IKEA Family membership. Customer loyalty is encouraged both online and offline. Small gifts, such as free pencils or the restaurant with traditional Swedish dishes, are intended to extend the customer's loyalty to IKEA and the duration of the purchase.
Shopping at IKEA becomes a day out for the whole family. Online, digital applications such as the IKEA app improve the customer experience by enabling individual advertising or discount promotions. At the same time, the platform strengthens its digital footprint. Platform companies often pursue the goal of becoming the market leader and displacing competitors.

IKEA pursues a very similar strategy here, very successfully, because hardly any other furniture company has achieved a comparable global position. Thanks to low prices, a large and constantly expanding product selection and its own production chains, IKEA is almost unrivaled worldwide in the furniture retail sector. By entering into digital services, as already mentioned

Task Rabbit or smart home systems, IKEA is expanding its sphere of influence and developing into a kind of "platform monopoly" in the furniture market.
IKEA already acts as a data-driven platform and exerts control over various interactions in the customer's physical and digital life. As a result, IKEA can be seen as a company that is transitioning to a platform-based consumer culture.

Sources
Thonet GmbH: Unternehmesngeschichte. Online verfügbar unter: https://www.thonet.de/de/unternehmen/geschichte (Zugriff am 11. Januar 2025)
IKEA Museum: Die Geschichte von IKEA. Online verfügbar unter: https://ikeamuseum.com/de/erkunden/die-geschichte-von-ikea/ (Zugriff am 11. Januar 2025)
IKEA Deutschland: Unser Konzept. Online verfügbar unter: https://www.ikea.com/de/de/this-isikea/about-us/geschichte-konzept-pubad29a981/ (Zugriff am 11. Januar 2025)
Foucault, M. (1979). Homo Oeconomicus. In The Birth of Biopolitics (28. März 1979). Goldsmiths College Lecture Transcripts.
Guattari, F. (2000). The Three Ecologies (I. Pindar & P. Sutton, Übers.). The Athlone Press. (Originalwerk 1989 veröffentlicht).
Ostrom, E. (1989). Governing the Commons: Reflections on the Commons. New York Times Publishing (Kapitel über die Institutionenanalyse).
Srnicek, N. (2017). Platform Capitalism. Polity Press.
Noble, S. U. (2019). Too Smart: How Digital Capitalism is Extracting Data, Controlling Our Lives, and Taking Over the World. MIT Press.

Transnational Home Swapping Plattform

Initially designed for one-to-one home exchanges or smallscalerentals, platforms like Airbnb have evolved into key playersin the global accommodation market, reshaping the way we travel.
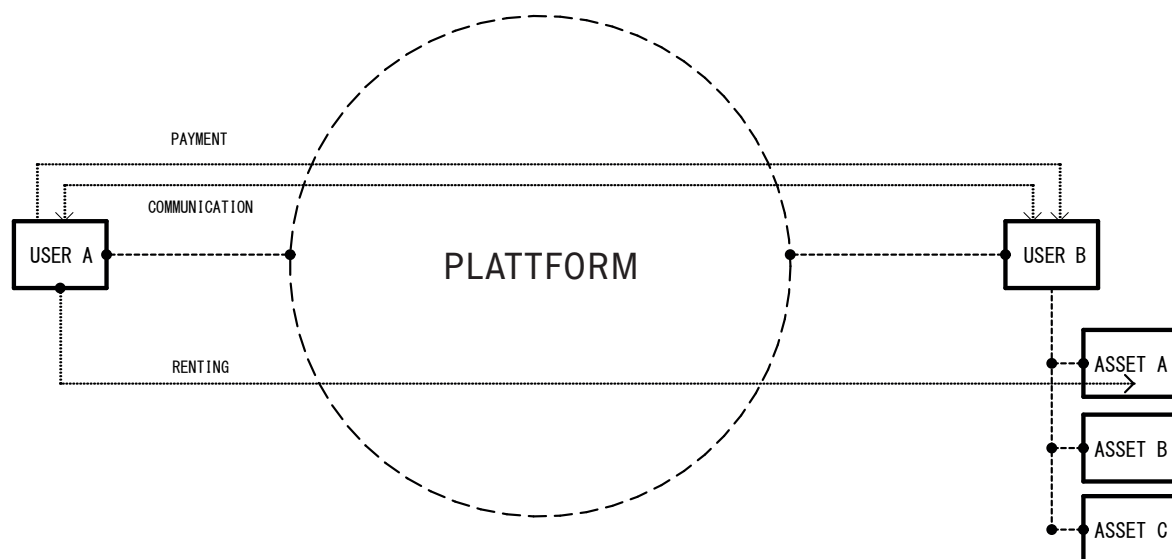
In order to understand the development, drives and origins of home-swapping platforms, which emerged in parallel to the vehicles of emerging commercial mass tourism in the mid-20th century, it is worth briefly analysing tourism in general as a phenomenon of cultural and social anthropological behaviour. While, from a cultural-historical point of view, travelling was a pure necessity for thousands of years and, as is well known, humans lived nomadically until they became sedentary, there are also behavioural-psychological causes for the inherent desire to travel. This begins with the human striving for cognitive fulfilment, as defined by Maslov in his pyramid of needs, which is expressed, among other things, by experiencing new experiences and broadening one's own horizons. When travelling, however, we also experience fundamentally positive emotions such as joy, amazement and enthusiasm, which serve as a motor in our struggle with everyday life. It was also the fundamental curiosity of people for the new and unknown that laid the foundation for the system that we understand as tourism today.

Tourism = 'the commercial organisation and operation of holidays and visits to places of interest 'The cultural trips known as Grand Tours, which were undertaken by the European nobility and upper middle classes from the 18th century onwards, could be seen as the first classic type of tourism. Travelling from one place to another was no longer done out of necessity but became an end in itself and, crucially, commercialised. The Industrial Revolution, the development of new, faster means of transport and the emergence of an increasingly globally interwoven world in the 19th and 20th centuries contributed to the development of the phenomenon of tourism as we know it today.

With the emergence of commercial mass tourism in the 1950s and 1960s, characterised by package holiday offers and hotel castles, the first home swapping offers were also launched. In the analogue age, home swapping was heavily dependent on association networks and organisations that used printed catalogues to communicate with the outside world. The Intervac platform, which was founded by teachers in Switzerland as early as 1953, is representative of the origins of home swapping. However, its founding motive was not yet the greater individualisation and ecologisation of travel, as we often find today, but quite simply to enable cheaper travel.

With the spread of the internet in the 1990s and early 2000s, home exchange increasingly shifted to the digital world. Platforms such as HomeExchange and Love Home Swap enabled users to present their homes online and find potential swap partners worldwide. This made access much easier and the community grew rapidly. Increased sustainability and self-confidence also changed the motives for using home swapping. The digital person of the 21st century wants an increasingly individualised travel experience: a move away from the mass processing of conventional providers, away from package holidays and hotels towards self-designed trips. People want to immerse themselves deeply in the socio-cultural pool of the host country, wallow in supposed authenticity, do something good for the environment and the local population. People in the 21st century are self-actualisers (actors?). They are unique. And their journey should be just as unique as they are.

The accommodation service providers of the 21st century are therefore faced with the task of responding to this demand. How do you accommodate all these people in individualised, tailor-made accommodation? Are classic home swapping platforms now starting their great triumphal march? People around the world swapping their homes. A new era of tourism? When the first social media platforms and numerous other digital start-ups began their triumphant advance in the early 2000s, Airbnb was founded in San Francisco. Originally conceived as a platform for networking micro-landlords who wanted to rent out an extra room or their own flat at short notice when they were away, the platform is now the largest provider of holiday flats in the world with 1.5 billion overnight stays and 7.7 million rentable accommodations. Even though Airbnb resembles traditional home swapping platforms in its appearance and system, there is one decisive and fundamental difference: Airbnb enables its users to conduct commercialised transactions. While traditional platforms are based on the direct exchange of homes or, alternatively, on points systems and are financed by users' membership fees, Airbnb is a pure rental platform and is therefore subject to all the dynamics of a hyper-economised world, while a temporary home exchange escapes the rules of the market. And so Airbnb became a scalable business model, not only for Airbnb itself but also for the users who were able to build up businesses via the platform.
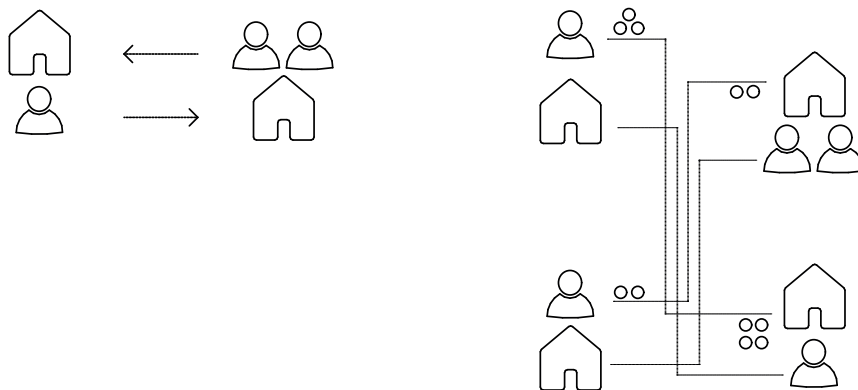
diagramm: forms of ‚old school' home swapping platforms
users exchange homes directly or a virtual currency is introduced to make swapping more flexibel

Home swapping and renting platforms such as Airbnb are representatives of a model of economic activity that has rapidly gained in importance in recent years - the shared economy. In other words, the shared use of resources and services that can be shared and rented via centralised platforms. The platforms themselves do not own the assets that are offered for rent. This has enabled their rapid growth in the form that we have seen with the ride-hailing service Uber, for example, which does not own a single car itself. Nick Srnicek summarises the rise of companies with a shared economy model in his book Platform Capitalism as follows.

„Companies like Uber and Airbnb have rapidly become household names and have come to epitomise this revived business model (shared economy). These platforms range from specialised firms for a variety of services (cleaning, house calls from physicians, grocery shopping, plumbing, and so on) to more general marketplaces like TaskRabbit and Mechanical Turk, which provide a variety of services. All of them, however, attempt to establish themselves as the platform upon which users, customers, and workers can meet. Why are they 'lean' platforms? The answer lies in an oft-quoted observation: 'Uber, the world's largest taxi company, owns no vehicles […] and Airbnb, the largest accommodation provider, owns no property.' It would seem that these are asset-less companies; we might call them virtual platforms. Yet the key is that they do own the most important asset: the platform of software and data analytics.„ (Srnicek, Nick: Plattform Capitalism, p. 43)
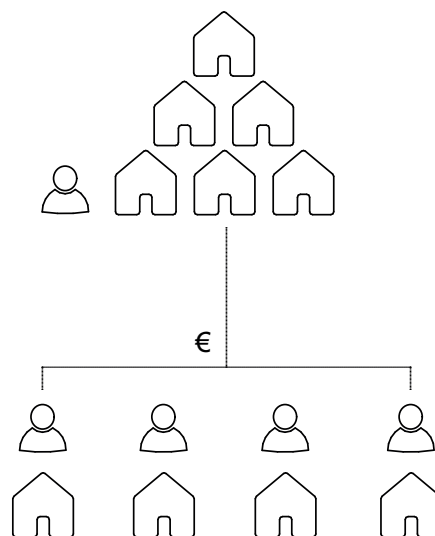
diagramm: Shared Economy platforms today show a clearer distinction between users who only use assets or services and those who provide them. In the case of Airbnb, there are now many users who only rent accommodations and others who rent out multiple properties.

Home swapping platforms thus span gigantic digital networks that also manifest them-selves physically to a limited extent, for example when flats or entire houses are reno-vated for rental purposes, but remain invisible to the observer in their entirety. When I walk through the city centre of Vienna today, I am aware that flats are probably offered for commercial rental in every second building, but this is only partially visible in the urban space. Only the numerous code-secured key boxes at the entrances suggest that short-term tenants are probably also going in and out of a building. In order to access these assets for myself, I am forced to leave the physical space and enter the digital platform via which they are offered. Consumers can often no longer escape the use of platforms in order to participate fully in society. However, the market power of house swapping providers such as AirBnb also entails other problems. These can be divided into three theses that build on each other.

1. data collection and network effects
2. monopolisation and dependency
3. Lack of living space

1. Like all digital platforms, home swapping platforms benefit from network effects. The phenomenon in which the value of a product or platform for users increases with the number of participants. The more people use a platform, the more attractive it becomes for others. In the case of homeswapping platforms, this is illustrated as follows: The more rentable properties there are, the more attractive the platform becomes for users. This creates an independent interaction, as the more users the platform has, the more attractive it becomes for providers.

'With network effects, a tendency towards monopolisation is built into the DNA of plat-form forms: the more numerous the users who interact on a platform, the more valuable the entire platform becomes for each one of them. Network effects, moreover, tend to mean that early advantages become solidified as permanent positions of industry lea-dership."(Srnicek, Nick: Plattform Capitalism, p. 49)

While classic home swapping platforms are financed through constant membership fees, Airbnb does without clearly recognisable fees and charges them invisibly to the user via the back door of the monetary transaction itself. In order to benefit from the aforemen-tioned network effects, access to a platform must be as low-threshold as possible.

The second major point in the enforcement of platforms for market dominance is the col-lection and utilisation of data. It can be used to adjust prices correctly, reach users in a more targeted manner and also be monetised directly. A particular problem here is that users are often unaware of what exactly happens to their data and how they are influen-ced by the algorithms fed with it. The contracts that platforms use to secure the use of data are also usually inherently problematic as there is no alternative for the user.

„(…) data is taken with little regard for meaningful consent and fair compensation for the people who that data is about. The issue of consent is relatively straightforward. (…) If companies seek consent to record, use, and/or sell a person's data, it is typically done in the form of a contract. The most common kind is called an end user license ag-reement (EULA).(…) EULAs are known as "boilerplate" contracts because they are gene

rically applied to all users. They are one-sided, nonnegotiated, and nonnegotiable. They are long, dense legal documents, designed not to be read. You either unquestioningly agree or you are denied access." (Sadowski, Jathan: To Too Smart: How Digital Capitalism is Extracting Data, Controlling Our Lives, and Taking Over the World, p. 56)

Für die Plattformen sind die Nutzerdaten aber unersetzbar da sie helfen Monopolstellungen weiter zu konsolidieren und die Möglichkeit bieten Nutzern weniger direkte Gebühren aufzuerlegen was sie auf den ersten Blick attraktiver machtt.„The challenge today, however, is that capital investment is not sufficient to overturn monopolies; access to data, network effects, and path dependency place even higher hurdles in the way of overcoming a monopoly (…). (Srnicek, Nick: Plattform Capitalism, p. 49)

2. The aforementioned monopolisation through network effects and the importance of data, which only large platforms can accumulate, in turn cause lasting problems for users. From a certain platform size, for example, landlords are dependent on the brokerage platforms and their algorithms. They do not have enough power to defend their interests against those of the platform. Due to the central role that platforms such as Uber or Airbnb play in society, it is also often difficult for local city councils to regulate the impact of the platforms.

For traditional accommodation providers, shared economy platforms are not only harmful due to direct competition, but also because their structures often mean that they do not have to adhere to the same strict regulations as classically commercialised providers. The platform itself escapes any local regulations and therefore often also the tax burden. Airbnb, for example, has its headquarters in Ireland where companies are taxed very favourably and only pays taxes indirectly in the countries where the actual turnover is generated via the landlords, who are themselves liable to pay tax. However, the actual company profit is only taxed in Ireland.

3. The most striking symptom of the sharp increase in the supply of short-term rental properties is the resulting problems on the property market. Especially in cities where living space is often already in short supply, it is usually particularly attractive to offer flats on platforms such as Airbnb at short notice. However, this leads to a housing shortage and therefore rising rents for the local population and also fuels the gentrification process. The current frontrunners for properties on Airbnb in Europe, for example, are the tourist metropolises of Florence (26 Airbnb per 1,000 inhabitants), Venice (25 Airbnb per 1,000 inhabitants) and Paris (22 Airbnb per 1,000 inhabitants). In other words, cities that are already suffering from mass tourism. In order to put a stop to these developments, increasingly strict regulations against short-term subletting have begun to be enforced, but these are often circumvented. Here we also come across the problem from point 2. Large platforms such as Airbnb often shift the blame in the event of violations of the applicable regulations onto the users, who are responsible for complying with the law.

Platforms such as Airbnb are driving the already ongoing commodification of the basic need for housing and can be seen as the next stage in the evolution of the property industry. They have transformed housing into a kind of 'common good' that at first glance can be used by anyone, but in reality, like natural resources, is susceptible to systematic exploitation. ‚Homo Oeconimcus' has appropriated the platform and uses it for his own purposes and those of the market

The platforms present themselves as a democratic solution that makes travelling more accessible for everyone and promotes cultural exchange. But behind this façade, a different reality emerges: market dynamics primarily favour those who already have resources, such as large landlords and investors, who can accumulate considerable wealth by scaling their offerings. Local communities, on the other hand, are often confronted with the negative consequences - from housing shortages and rising rents to the displacement of residents from their neighbourhoods.this inequality clearly shows that Airbnb in its current form is far from being truly democratic. A platform that assumes such a position of power through network effects, data control and market monopolisation centralises control over essential resources in the hands of a few. Instead of promoting equality and participation, it contributes to the concentration of wealth and influence and exacerbates existing social and economic inequalities. Such a concentration of power fundamentally contradicts the idea of a fair and shared system.

In order to master these dynamics, it would be too short-sighted to rely solely on regulations to curb the negative effects of shared economy plateforms. It would be more holistic to accept that living space is a universal good that is only available to a limited extent, but from which everyone in society should benefit equally. At present, it is only used for profit by a few who have appropriated the structures of the market and use the common good of housing for their own profit. A system that is only based on generating so-called added value with something that should be available to us all and selling it for personal gain. Comparable to the system of usufruct in agriculture. Tehy appropriate a good that they do not 'own' (as it should be a common good) and exploit it for their own added value. I would argue that shared economy models today are often based on a perverted forms of this notion and indeed the basic notion of property for one's own benefit as we practice it today also had its origins in the idea of usufruct and the colonial idea of appropriation and improvement. (Harney, Stefano, Moten, Fred: All Incomplete, p. 32-34)

Comparable to other common goods, what is needed today is a rethinking of these old-fashioned ideas of ownership and property and regulations for the fair use of the resource of housing for all people. The same applies to the platforms that connect our world. They have become too important for society to remain in the hands of a few. Elinor Ostrom's text 'Governing the Commons' can provide food for thought on the communal use of living space. Similar to the common pool resources examined by Ostrom, such as fishing areas or irrigation systems, housing resources could also be organised. Ostrom shows that communities can effectively manage resources sustainably through self-organised rules and local governance if they are based on trust, shared norms and local monitoring. A key starting point for the use of housing as a commons could be to involve local communities in the management and establish rules for equitable use and access. Ostrom also emphasises the importance of places for exchange and organisation in such systems. However, these do not necessarily have to be physical. The technology of the already established Internet platforms could help here. As networking sites for communities to manage their living space fairly and benefit from it collectively.

Sources

Andrew Stevenson, The psychology of Travel, 2023

https://www.psychologie-heute.de/leben/artikel-detailansicht/43471-fuenf-freuden-der-ferne.html

https://www.dwell.com/article/brief-history-home-swapping-house-exchanges-99b78250

https://de.wikipedia.org/wiki/Geschichte_des_Reisens

https://www.planet-wissen.de/gesellschaft/tourismus/geschichte_des_reisens/index.html

https://www.derstandard.at/story/3000000237330/bisher-nur-geringer-rueckgang-des-airbnb-angebots-in-wien

https://www.nzz.ch/visuals/das-sind-die-airbnb-hotspots-in-europa-ld.1844803

Srnicek, Nick: Plattform Capitalism, 2016

https://de.wikipedia.org/wiki/Sharing_Economy

Sadowski, Jathan: To Too Smart: How Digital Capitalism is Extracting Data, Controlling Our Lives, and Taking Over the World, 2020

Ostrom, Elinor: Governing the commons, 1990

fig. 1 the boom for ‚individual' accomodation, chalet village Fanningberg, photo: https://www.a-list.at/salzburg/hotel-spa/l/chaletdorf-fanningberg-lungau-alpine-apparte-ments.html, 2016
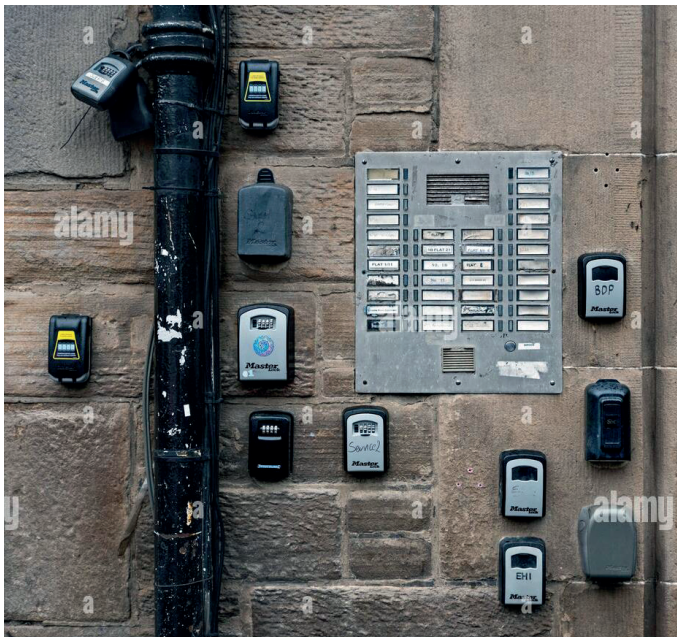
fig. 2 Keylockers on a door in Vienna, photo: by Alan Wilson, 2020
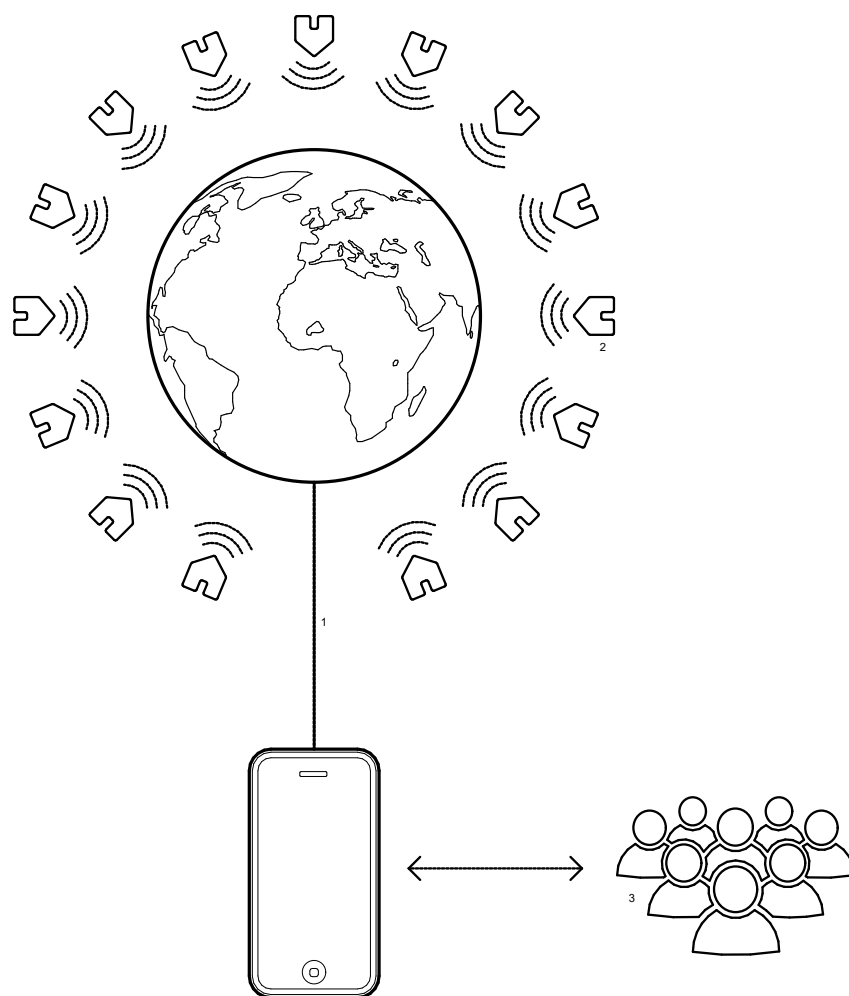
Dating Apps

Digital platforms for fostering sexual or romantic connections in digital and physical space. On a App Interface platform users can swipe through algorithmic curated potential partners.
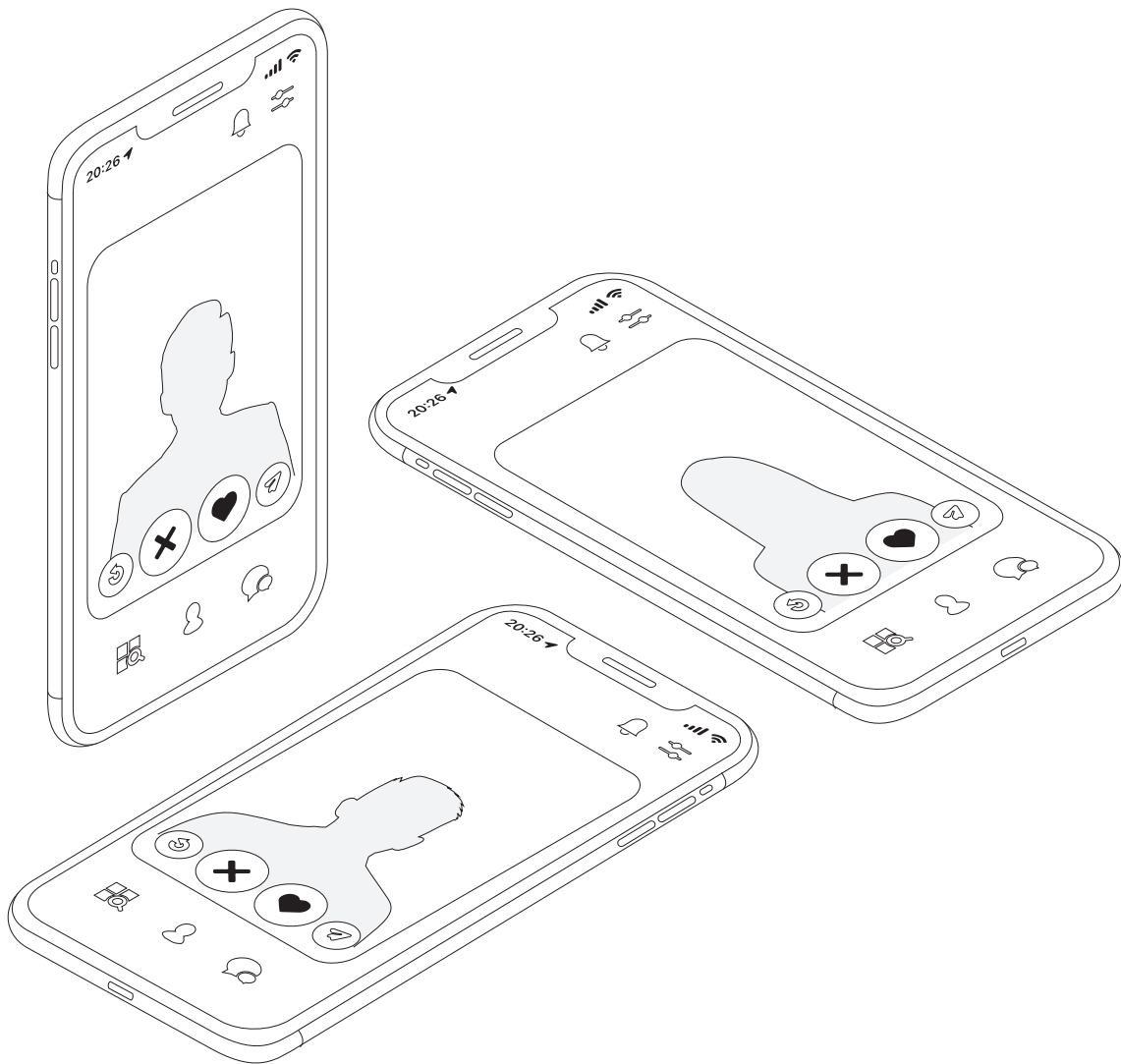
Dating Apps

Sexual and romantic relationships are a fundamental human need, deeply rooted in our evolutionary origins. Dating, therefore, is a universal phenomenon that affects everyone. However, the process of finding a partner presents challenges for each of us. For many, simply meeting an interesting person is a significant hurdle. People living in small, isolated communities, such as highly suburban areas, often face a very limited pool of potential partners. Minority groups are similarly impacted, whether due to sexual orientation, cultural background, or specific interests.
These individuals often find themselves in environments where they cannot openly express or pursue their preferences—or they simply lack access to others who share their interests. This challenge is compounded by the increasing disconnection individuals feel from their surroundings. Social media has become our primary source of information and communication, while modern society frequently prioritizes career success. As a result, interpersonal relationships and maintaining social connections are often neglected.
Even when someone does find a desirable person, the next step—expressing their feelings—remains daunting. This involves significant risks, including the possibility of embarrassment or rejection, which can be especially intimidating for minority groups. For them, declaring their interest may carry even greater risks, such as facing negative reactions. Introverted individuals also encounter numerous obstacles in navigating this process.
All these factors make dating a complex and unpredictable endeavor, fraught with uncertainty, requiring courage and often reliant on chance.

* * *

An online dating app is of such nature, that it connects people digitally based on shared interests, preferences, and potential compatibility. Without the time consuming act of real life social interaction the dating app is a very effective way to get connected to potential romantic partners. Through leveraging a combination of user-provided information, algorithms, and machine learning techniques the platform analyses the user´s romantic and sexual preferences. Based on the collected data like minded persons with a high similarity score are being curated. On a playful designed user interface the user can see the suggested partners. Through the anonymous Feedback mechanism the user decides whether or not they find the suggested profile attractive or not. If the feedback on both sides checks in positive the users get the option to open a private one to one chat function. Personal communication takes place within the dating app chat. Every Dating App should consist of the following key features.

*User Profile
Every App User creates a personal Profile. Personal information about age, gender, sexual orientation, location and interests are defined. Following a public profile is being set up: personal pictures and information, like occupation, lifestyle, free text column, to be seen by other users are being curated.
*Location Based Matching
Through GPS integration personal location data is being collected every time that the

app is being opened. Based on integrated geolocation, users discover potential matches within a certain range. The distance range within profiles are being shown can be determined by the user.

*Feedback Mechanism

A feedback mechanism gives users the option to interact with shown potential profiles. Through the users behavior, the app learns about their preferences and shows similar profiles in the future. While browsing through profiles users can express romantic interest or disinterest. The most common mechanism is the swiping mechanism, a swipe left means no interest, while swiping right indicates interest. This mechanism is a very playful and fast technique to browse through a high number of profiles in little time.

*Chat

Once a connection is made, meaning positive feedback from both parties a function to chat appears. The app facilitates communication through in-built chat rooms. Through text messages or video call functions the users can make personal contact with each other

*Intuitive User Interface

The user interface translates profile information and collected data into intuitive visual interface. The design is playful and easy structured to make the process of finding other matches easy and accessible.

The main goal for dating apps should be to find most likely fits for the user. To not swamp the user with uninteresting or not fitting options, compatibility assessment is a crucial aspect of dating apps. Science and algorithms at this time cannot yet guarantee a perfect match, following aspects should be considered to make the match as likely as possible

*User preference

Key factors like the preferred gender, sexuality, age range, education, hobbies and other specific criteria should be considered to filter potential matches.

*Similarity score

Based on interests, hobbies or other relevant attributes a similarity score is being analyzed and attributed. Other profiles with similar attributes are preferred in their appearance.

*Behavioral Analysis

Based on the user's feedback behavior and other interaction patterns unconscious interest data can be collected. Factors like response time, messaging frequency and the type of interaction can be considered.

To further increase the likelihood of a potential match machine learning algorithms can be used. They analyze vast amounts of user data to predict and recommend potential matches

*Collaborative Filtering

This method examines user behavior and preferences to find patterns, suggesting matches based on shared interests and similarities with other users.

*Natural Language Processing (NLP)

NLP analyzes user-generated text, such as profile descriptions and messages produced in in-app chatrooms. In depth analysis extracts further details about interests, and in depths information like communication style.

*Image Recognition

Machine learning models analyze profile photos to identify visual features and preferences, refining the matching process even further.

Dating apps collect very intimate data. Creating a safe environment therefore is a top priority. While apps provide various safety features, individual awareness and caution are just as crucial for a secure online dating experience. Here are some ways both platforms and users should pay attention to:
*Profile Verification
Through real time video chat, machine learning tools analyze the user's facial features and compare to their profile pictures. By confirming authenticity before granting access, they reduce the risk of scammers and harmful users entering the platform.
*Block and Report Tools
Users can report inappropriate profiles or messages, which are reviewed by moderators to ensure community safety. Users sharing inappropriate material or text are being banned from the platform. Profiles can also be blocked by the user, disabling both parties to interact with each other.
*Personal Safety Measures
Users also play a role by using strong passwords, enabling two-factor authentication, and being cautious when sharing personal details or meeting someone in person. Simple steps like meeting in public places can greatly enhance safety.

To ensure the dating app to remain available for users long term, you need to ensure the app is profitable. The following lists possible strategies to generate revenue.
*Affiliate Marketing and Paid Ads
This involves promoting third-party products or services within the app. The app earns a commission for driving traffic or sales through affiliate links or by displaying paid advertisements.
*Subscription Plans
Users pay a reoccurring fee monthly, quarterly, or annually to access exclusive features, enhanced functionality, or ad-free experiences within the app.
*Premium Feature Upgrades
Users pay to unlock advanced or specialized features, such as higher visibility, personalized matches, or enhanced messaging options, providing a competitive edge within the app.

The design and layout of the app, ensuring a user-friendly and visually appealing experience. A clean, intuitive interface helps users easily navigate and access features like matching, messaging, and profile management.
*Social Sign-In
Allows users to create accounts or log in quickly using their social media profiles (e.g., Facebook or Google), streamlining the sign-up process and enhancing convenience.
Security and Privacy Controls
Features that protect user data and privacy, such as options to hide personal information, block or report users, and control who can view their profiles or send messages.
*Geolocation
Uses GPS to show potential matches based on proximity, making it easier for users to connect with people in their area or adjust their location preferences.
*User Profiles
Detailed profiles where users can showcase their photos, interests, and preferences, helping others determine compatibility and fostering more meaningful connections.
*Profile Settings

A section where users can customize their app experience, such as updating personal details, adjusting visibility, or managing notifications and preferences.
*Chat Messaging
An in-app communication tool that allows users to send text, emojis, and even media, enabling them to get to know their matches and build connections.

Certain features can be used to further enhance the interaction and maximize time spent on the app.
*Gamification
Incorporating game-like elements, such as swiping mechanics, daily challenges, rewards, or badges, to make the dating experience more engaging and fun, while encouraging users to stay active and interact more frequently.
*Push Notifications
Timely alerts sent to users' devices to keep them engaged, such as new match notifications, message reminders, or updates about app features, ensuring users stay connected and return to the app regularly.

Dating apps fundamentally transform the way people approach romantic and sexual relationships, offering a streamlined and accessible alternative to traditional methods of connection. Unlike conventional avenues, such as meeting through friends, social events, or community gatherings, dating apps provide a virtual space tailored specifically for matchmaking. This shift has redefined the dynamics of dating, making it a more structured and data-driven process. By leveraging technology, dating apps address many of the hurdles, such as geographical isolation, the scarcity of potential partners within minority communities, and the anxiety associated with initiating romantic interactions. These platforms democratize the process, offering users a wider range of choices and the autonomy to explore relationships on their own terms.
Moreover, dating apps bridge the gap between digital and physical interaction. Location-based features ensure that suggested matches are within a feasible distance, facilitating opportunities for in-person meetings. By narrowing the geographical scope of potential partners, these platforms make it easier to transition from virtual connection to real-world interaction. This balance between online engagement and offline possibilities addresses the isolation that often accompanies urban living, where consumption free places for social interaction are increasingly rare.
The integration of algorithms allows for an unprecedented level of precision in compatibility matching. Based on user-provided data—such as age, interests, and preferences—alongside behavioral analysis, apps suggest potential partners who align with the individual's relationship goals. This algorithmic approach eliminates much of the guesswork and serendipity traditionally involved in dating, providing users with curated options that increase the likelihood of a meaningful connection. For minority groups, this means greater visibility and the opportunity to connect with like-minded individuals who might otherwise remain out of reach. Additionally, introverted individuals who may struggle with face-to-face interactions benefit from the controlled environment dating apps offer, where they can engage in conversations at their own pace.
The technological framework of dating apps introduces efficiency accelerating the pace in which we can find potential partners. In modern society many face professional and social pressure. To prioritize your professional career or to work overtime to make ends meet, for many people means only few free time left. Dating platforms save valuable time. Instead of attending numerous social events with uncertain chances of meeting a person of reciprocated interest, users can browse through hundreds of profiles in just minutes.

This quick access to a wide range of potential matches is especially beneficial for those in urban areas or with limited social networks.

The gamification of the interaction process further revolutionizes the way people engage with dating. Swiping mechanisms, matching notifications, and playful user interfaces transform the search for a partner into an engaging and less intimidating experience. This reduces the social risks and emotional labor often associated with approaching someone in person. Instead of the high-stakes scenario of public rejection, users can express interest with a simple swipe, receiving instant feedback when their interest is reciprocated. This low-pressure environment fosters a sense of empowerment, encouraging users to explore their options without fear of judgment.

<p style="text-align:center">* * *</p>

As described in the previous chapters, it is clear that online dating apps have a significant impact on our dating behavior. It's easy to open a personal profile and swipe through seemingly endless piles of profiles for potential matches. Quirky animations, sounds and user interfaces make the process playfully easy. The app manufacturers rely on a large community of users and analyze and store vast amounts of usage data. Various apps cater to the general public or specific interest groups and suggest meeting sexual or romantic partners in a playfully easy way. While all the positive aspects have been covered in the above chapters, a critical look at mechanisms and techniques will be taken below.

Dating apps rely on a large community of users and try to proactively bind users to their app and encourage them to use it regularly. This leads to a monopolization of the dating market. While the importance of online dating apps is increasing in society as a whole, it is clear that few online dating apps dominate the global market. As Nick Srnicek criticizes in Platform Capitalism, online platforms are always striving to establish themselves in various areas of life in order to maximize their own profit in structures of digital capitalism. It should be mentioned that only active users generate profit for the dating app operator. Implemented payment options such as "boosts" or "super likes" are intended to further increase success in dating. From a purely economic point of view, however, a successful match means the loss of an active, profitable user. It is clear that dating platforms and sexual relationships are being capitalized, becoming a commodity that is sold and consumed. A fundamental human need is thus embedded in a capitalist logic (Nick Srnicek). The fact that these dating apps pursue capitalist goals should be critically questioned. The question arises as to whether dating apps pursue matchmaking as their primary goal. Tactics such as the gamification of the apps, triggering push notifications and offering additional features provoke regular interactions. Using the app rewards the user by releasing dopamine. Behind every profile is a potential match. User surveys show that many users use dating apps largely to pass the time or as a game. This means that the use of dating apps harbors a potential risk of addiction.

Worldwide comparisons of usage figures show that in digital capitalism, the market is dominated by a few providers. A few apps, above all Tinder, Bumble, Hinge and Grindr, are leaders in the global market Nick Srnicek emphasizes that this concentration of power is typical of platform companies, which use network effects to oust competitors and secure their own position of power. The result is a limited choice of providers for users. This gives the operators almost unrestricted control of global dating behavior. Their underlying algorithms decide who we see and who we don't, certain groups of people who can be disadvantaged or favored and countless other mechanisms that run in secret. Companies therefore have the potential to steer user behavior in a direction that

is beneficial to the platform. For the consumer, all these mechanisms remain hidden, and he is powerless in the face of all these factors anyway. This raises ethical questions and shows how deeply platforms can intervene in personal decisions.

The apps also capitalize on the data they collect and store. Dating apps show extremely extractivistic data collection mechanisms. As described by Jathan Sadowski in Too Smart: How digital capitalism is extracting data, controlling our lives and taking over the world. Consumers are unable to understand what this data is used for, by whom and in what form. Data protection and user contracts are concluded before the apps are used. These contracts are non-negotiated and non-negotiable (Jathan Sadowski); the service cannot be used without consent. The contractual provisions are designed not to be read, consumers are used to agreeing to these contracts. Providers of these platforms force users to sell their own data. Many consumers are usually simply unaware of the exploitation of their data, and the monopoly position of the apps makes it impossible to switch to other providers.

* * *

These platforms are subject to the mechanisms of digital capitalism, as described by Nick Srnicek and Jathan Sadowski. Not all of the criticisms described here need to be applied to all dating apps. However, the description shows potential power imbalances that platforms can exploit to their advantage at any time. Not only the possibility to change the dynamics of interpersonal relationships, but also to reinforce social inequalities and undermine social structures. It remains an impressive reminder to question the intentions of online dating apps. However it is not without reason that online dating platforms enjoy great popularity. They suggest potential partners in the area in a simple and playful way. They lower the inhibition threshold for first contact and democratize the process of finding a partner. The use of dating apps not only brings practical benefits, but also a transformation of social dynamics. The way people evaluate attractiveness, compatibility and romantic interest has changed through the visual and data-based display of profiles. The concept of "love at first sight" is being replaced by data-based suggestions, which often promise a higher probability of long-term compatibility. At the same time, the role of chance, which is often idealized in traditional romantic narratives, is largely eliminated. Dating is becoming a predictable and analytical process, which gives users more control but also creates a new kind of dependency on digitally capitalized Online Platforms.
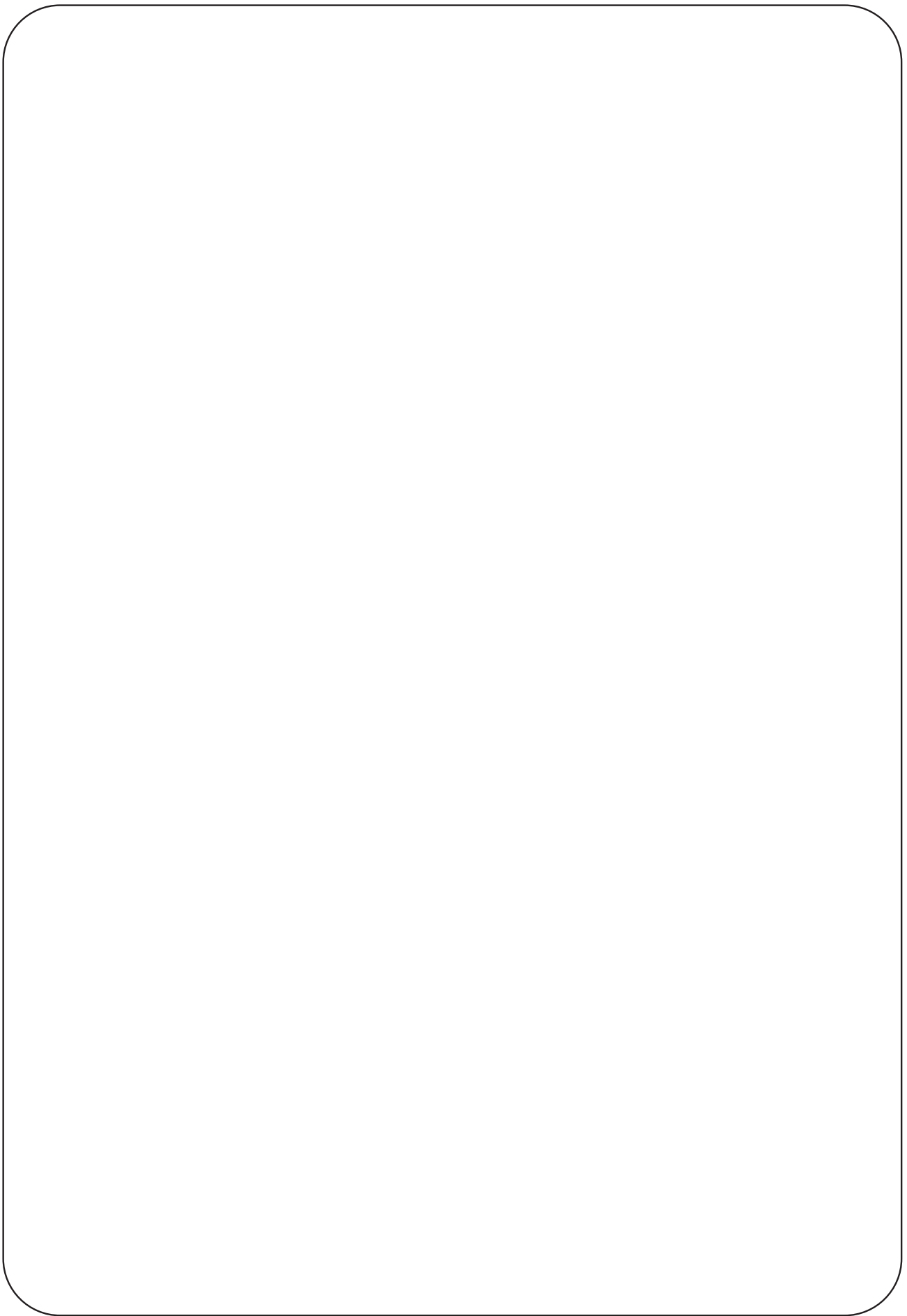
Sources
Sadowski, Jathan (2020) Too Smart: How digital capitalism is extracting data, controlling our lives and taking over the world.
Cambridge, MA: MIT Press, 49-72.

Srnicek, Nick (2017) Platform Capitalism. Cambridge: Polity Press, 36-92

Aretz, Wera (2015) Match me if you can: Eine explorative Studie zur Beschreibung der Nutzung von Tinder in Journal of Business and Media Psychology (2015) 6, Heft 1, 41-51

https://www.statista.com/statistics/1359421/top-grossing-dating-apps-worldwide/, last seen 12.01.2025 20:00

https://www.captechu.edu/blog/technology-behind-popular-dating-applications?utm_source=chatgpt.com, last seen 12.01.2025 20:00
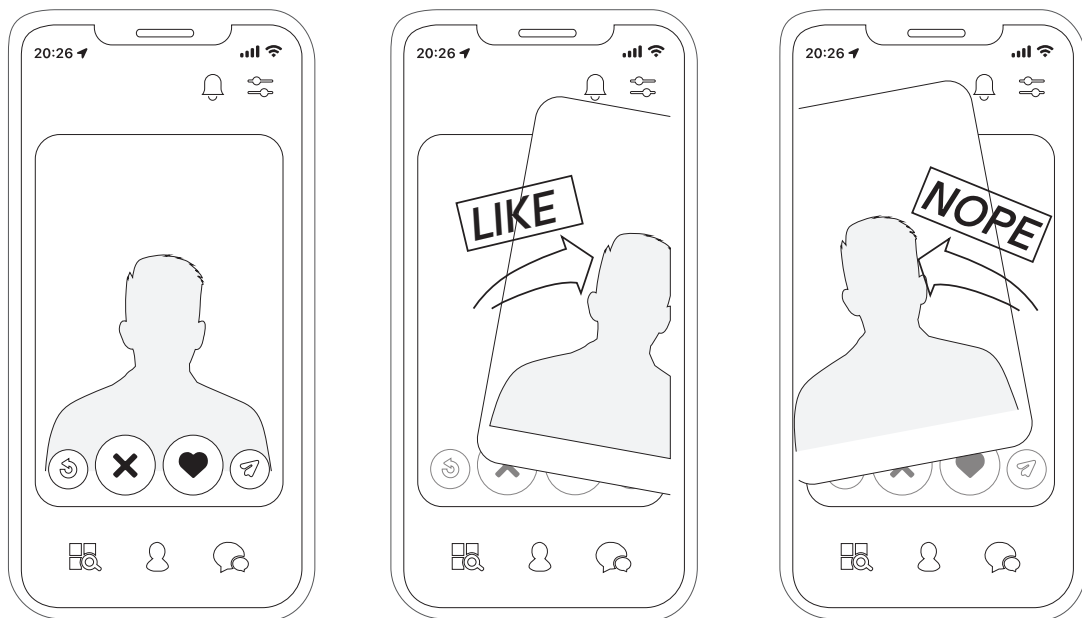
Dating Apps

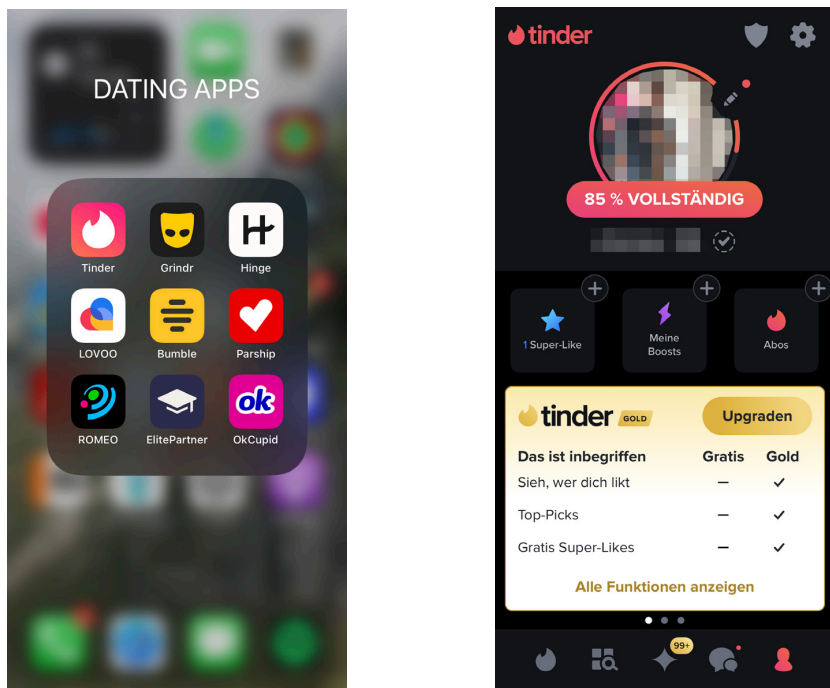

fig. 1 swipe mechanism, illustration: leimer jonas, 2024

fig. 2 dating application, symbols payment options , screenshot: leimer jonas, 2024

Friendship Apps

Friendship apps are becoming increasingly popular in modern life. They have emerged in response to growing social disconnection and the difficulty of forming new relationships in a world dominated by work and technology.
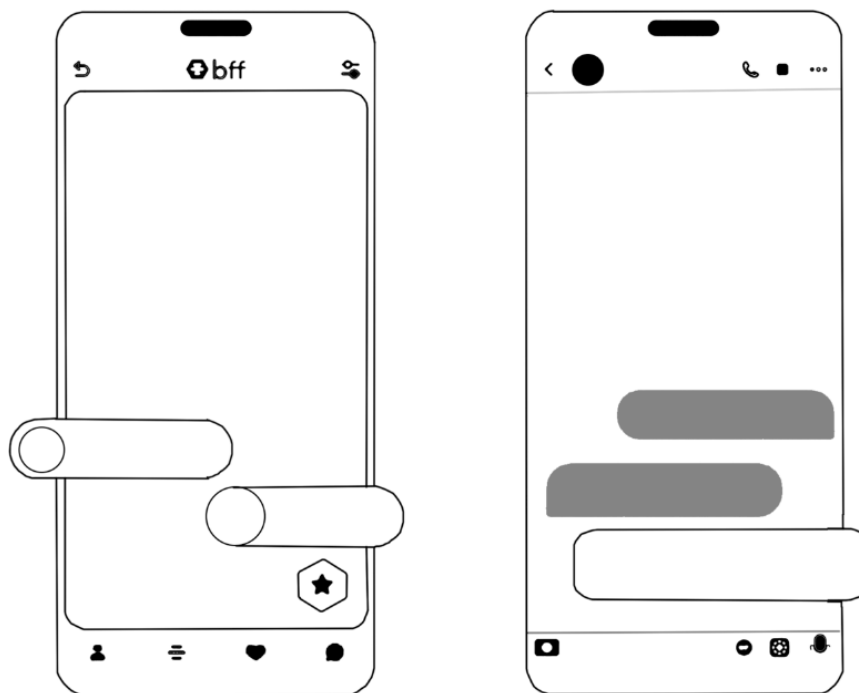
FRIENDSHIPS APPS

Society and our ways of relating to each other are constantly changing and evolving. Different cultures, languages and traditions have historically shaped how we relate to each other in various parts of the world. The way we form our families, communities and make friends has varied considerably according to geographic, social and cultural context. However, despite these differences, there is one constant: interpersonal relationships have mostly occurred through direct physical contact in what we might define as "the real world." In the contemporary world, this pattern has undergone a radical change. Regardless of culture, ethnicity or language, it is increasingly difficult for people to establish interpersonal relationships spontaneously and naturally in the physical realm. This phenomenon has been influenced by globalization, the digitization of the media and, in particular, the rise of the Internet. Through these new technologies, we have developed a different way of relating to each other, one that has profoundly transformed our social lives: mobile applications. Today, these platforms have become the main channel for forming communities, finding partners and establishing friendships.

Mobile applications are tools designed to meet a wide variety of needs. From platforms for playing sports, learning music or art, to those that allow finding a partner or friends. This essay will focus specifically on the phenomenon of friend-making apps, a pattern that has gained significant relevance in our daily lives. We will analyze the reasons behind this change, the issues that underlie the difficulty of socializing in a physical way, as well as the solutions proposed by these applications. We will also discuss the effectiveness of these solutions, exploring both their advantages and disadvantages.

To carry out this analysis, we will rely on the ideas of several authors that provide us with a solid theoretical basis. Félix Guattari, with his text The Three Ecologies (Guattari, 2000), offers an interesting perspective to examine how digital applications interact with social and technological transformations today. On the other hand, the text All Incomplete by Harney and Fred Moten (Harney & Moten, 2021) will also be addressed, providing a critical framework as these friend applications could be seen as extensions of capitalism, where human connections are optimized and managed as "products." Likewise, the work of Elinor Ostrom, particularly her Governing the Commons (Ostrom, 1990), will help us approach these applications from the concept of the "digital commons," understanding that users contribute personal information and active participation, which contributes to the creation of a commons accessible to all members of these platforms. These perspectives, along with those of other authors, will be fundamental to understanding the impact of applications on social relations and the change in interpersonal behaviors in the digital era.

Part I
To understand the pattern governing friendship applications, it is essential to begin by defining and contextualizing several terms. First, what is friendship? From an etymological perspective, the word "friendship" has roots in the Greek philia, meaning "affection, friendship, inclination toward," and in more recent contexts, "abnormal attraction toward." This term comes from philos, translated as "lover" or "loving," related to the suffix -philic, which denotes affinity or attraction toward something.

and is related to the suffix -philic, which denotes affinity or attraction toward something. Friendship is a unique social relationship that is established, at a minimum, between two people. This bond has been explored and valued in various cultures and religious traditions. For example, in Buddhism, friendship is considered indispensable for spiritual growth. In the Jātakas, accounts of previous lives of Gautama Buddha, a story is found in which a hare offers its life to feed a friend, demonstrating selfless altruism and generosity without attachment.

In ancient Chinese philosophy, friendship is analyzed from values such as Chung (loyalty) and Shu (sympathy), fundamental principles of Confucian doctrine. In this tradition, a friend is considered a morally authentic person, and friendship is seen as a guide to a spiritual life based on higher values.

For his part, Aristotle addressed friendship in his work Nicomachean Ethics. For him, friendship is one of the highest and most indispensable virtues for attaining happiness (eudaimonia). He distinguished three types of friendship: for utility, for pleasure and for virtue, the latter being the highest. According to Aristotle, friendship by virtue arises between people with similar values and is based on the mutual desire to seek the good of the other in a disinterested manner.

Over time, the perception of friendship has evolved. In modern Western society, and from contemporary anthropology, friendship is seen as a structural part of life that facilitates business, political and family relationships. According to Michael Eve: "The contrast between social anthropology, which takes kinship as its paradigmatic idea of social ,structure,' and sociology, which focuses on similar classes or principles of objective social organization, is deeply rooted" (Eve, 2002).

From this perspective, friendship is not only an emotional bond, but also a tool for building alliances and factions within broader social structures. In contrast, in modern sociology, Anthony Giddens defines friendship as a personal and free relationship, characterized by shared values and an emotional connection. According to him: "Modern friendship is an example of the ,pure relationship,' not anchored in external conditions of social or economic life" (Giddens, 1991). In addition, the technological revolution has also caused a great impact, and has changed the way we define friendship and since the creation of the internet in the 1970s, the way humans relate to each other has changed radically. According to Omkumar Krishnar (1999): "The accelerating pace of modern technological innovations has significant implications for institutions, and particularly for culture."

The Internet has connected computers globally, allowing people to interact miles apart. Today, it offers unlimited services, from streaming and social networking to news and e-commerce, opening up an infinite range of opportunities.This change has also affected how humans interact. For example, children used to entertain themselves in playgrounds or with physical toys; now, tablets and computers are their main tools for fun. Adults, meanwhile, have moved community activities to digital platforms, reducing physical interaction.

Many of the services offered by the Internet are individual, which distances us from human beings in real life. In this way we have experienced changes in the role of the community.

Traditionally, the way we meet people, make friends and form communities have always played a central role in our lives, representing the interconnectedness of social relations in a specific place. Tnnies (1988) introduced the concepts of Gemeinschaft (community) and Gesellschaft (society) to analyze the transition from pre-industrial to industrial societies. Gemeinschaft: An organic community based on family, customs and a shared sense of belonging. Gesellschaft: A more industrialized and individualistic society, where relationships are more functional and less personal. The process of urbanisation and industrialisation would result in the destruction of Gemeinschaft and consequently the destruction of traditional community, security and intimacy, p. 276, Tnnies.

But then, how would people born in the digital age such as Generation X define friendship, having been born in the midst of the technological revolution and also in the process of changing how we view community. The concept of friendship has been significantly shaped by the rise of the internet and social media. For many young people, a friend can be defined by the number of contacts added on platforms such as Facebook or "best friends" lists on Instagram and WhatsApp. These connections, however, may lack meaningful in-person interactions, limited to occasional reactions on stories or posts. While social networks have broadened the definition of friendship, they have also raised questions about the authenticity and depth of these bonds. In this context, friendship may be perceived more as a network of connections than as a deep bond based on shared values and altruism. T

Today, technology fosters a "digital Gesellschaft," in which individualism predominates and interaction is digitized. This raises challenges on how to redefine the concept of community in the modern era. Many young people measure the value of friendship in terms of followers or friends on social networks such as Facebook, and how many people react to their posts.

Part II

These interactions that lack value and meaning show us the crisis in human relations that we are going through as a society. And to delve further into this topic, I would like to introduce Guattari's text, The Three Ecologies, with its innovative proposal to address the environmental, social, and mental crises affecting the contemporary world from the concept of ecosophy. Ecosophy addresses three levels of interconnection: environmental ecology, social ecology, and mental ecology. "Only an ethico-political articulation—which I call ecosophy—between the three ecological registers (the environment, social relations, and human subjectivity) would be likely to clarify these questions" (Guattari, 2000, p. 28). This approach focuses on arguing how technoscientific transformations, globalization, and capitalism are eroding not only the environment but also human relations and individual mental health.

That being the case, are these online relationships and interactions enough to supply

our need as humans to socialize and belong? If the value of friendship is based on these terms of likes and the list of friends and followers on Instagram, Snapchat, or Facebook, it might seem that we are in one of the happiest generations of all time, given that online interactions are abundant and will theoretically provide a solid circle of support. However, it is not the case; they only isolate us more and more. As Guattari also mentions, traditional social connections such as family and local communities have been weakened by technocracy, individualism, and the commodification of human relationships. "Social ecosophy will consist in developing specific practices that will modify and reinvent the ways in which we live as couples or in the family, in an urban context or at work" (Guattari, 2000, p. 35).

In addition to technology, there are other factors that contribute to this isolation. Globalization, for example, has facilitated the rapid dissemination of information, which has generated a homogenization in the way we think, act, and relate to each other. This excessive influence dilutes the distinctive features of each culture, leading to the loss of cultural and social differences that could enrich societies. Instead, a cultural hegemony dominated by Western influences prevails. As Guattari points out, mass media and consumer culture manipulate subjectivity by creating desires and standardized ways of thinking, resulting in mental and emotional impoverishment. Thus, if one were to ask a young person in the United States and a young person in Brazil what they understand by friendship, they would probably answer similarly, based on the number of followers on social networks. Guattari argues that "Mental ecology will lead us to reinvent the relation of the subject to the body, to phantasm, to the passage of time, to the 'mysteries' of life and death" (Guattari, 2000, p. 35).

On the other hand, the low cost of fast means of transportation has facilitated human mobility, making it common nowadays for people to travel to other countries not only for vacation but also to study and work. Thus, for those who have made the decision to travel and live abroad, meeting new people can be a challenge. Cultural differences and social expectations are not always evident, which can lead to misunderstandings or keep interactions only superficial. Add to this the language barrier, which can limit communication and make everyday situations stressful or confusing.

An additional reason behind this problem can be attributed to high living costs and increasing work responsibilities. For many young adults, establishing new personal relationships represents a considerable challenge. This phenomenon is reflected in magazine and newspaper headlines, which frequently pose questions such as "Why is it so hard to make friends after 30?" or feature articles with "Tips for making friends in your 30s." These difficulties are a tangible problem, the causes of which are multiple and complex. For example, many people spend most of their time at work, either to cope with the high costs of living in the urban areas where they live or simply because of a commitment to fulfill their work obligations. This results in a significant reduction of available free time, taking away from hobbies or social activities that facilitate the building of new interpersonal connections.

In this context, Félix Guattari's critique of capitalism, and in particular what he calls "Integrated World Capitalism" (IWC), becomes relevant.

In this context, Félix Guattari's critique of capitalism, and in particular what he calls "Integrated World Capitalism" (IWC), becomes relevant. Guattari argues that this system is not only devastating the environment and disintegrating social bonds, but also exerts a more insidious and imperceptible influence on people's attitudes, sensibilities, and minds. As the author points out: "IWC is not only destroying the natural environment and eroding social relations, but is also engaged in a far more insidious and invisible penetration of people's attitudes, sensibility and minds" (Guattari, 2000, p. 33).

This economic and social model has normalized excessive work patterns oriented solely to the production of capital, stripping people of a critical perception of the nature of these dynamics. What is essentially unnatural and unhealthy has been internalized as an unquestioned norm, the product of long exposure to this system. In this way, many find themselves in a passive posture towards their environment, a condition that is not necessarily an individual choice but the result of the massive influence of the media, which reinforces these standards as if they were absolute truths.

Guattari also points out how this situation affects the subjectivity of individuals: "A vast majority of individuals are placed in a situation in which their personality is dwindling, their intentions are rapidly losing all consistency, the quality of their relations with others is dulled" (Guattari, 2000, p. 34). This process not only hinders the creation of social bonds but also contributes to alienation and the weakening of critical capacity, thus perpetuating a cycle of isolation and dependence on the capitalist system.

In summary, the phenomenon of difficulty in establishing friendships in adulthood cannot be understood in isolation, but as part of a broader context where economic and labor demands, together with the dynamics of integrated capitalism, profoundly shape human relationships and social structures.

Another reason I would like to address is anxiety and fear. More and more people are becoming accustomed to interacting online, losing something intrinsic to being human: the ability to socialize in person. Approaching someone face-to-face can be a challenge filled with anxiety and fear, often leading to avoidance altogether. This phenomenon is exacerbated by reliance on virtual interactions, where anonymity and lack of eye contact reduce social pressure. In the long run, this lack of practice in personal interaction can create a vicious cycle, where anxiety increases with each failed attempt at real connection. However, fostering safe spaces for socializing and promoting the development of interpersonal skills can help counteract this problem and restore confidence in face-to-face interactions.

All of these reasons have caused making friends to become a challenge, which can lead people to feel isolated, and it can take a long time for them to fully integrate into a new community. This initial disconnection can lead to a feeling of loneliness that, in some cases, negatively affects mental health and overall well-being. For example, a study in the United States conducted on young people up to the age of 30 found that, after 2012, a significant decline in happiness, satisfaction, and well-being was observed,

along with an increase in loneliness, anxiety, and depressive symptoms (Twenge, Spitzberg, & Campbell, 2019). Much of this is due to overuse of technology and isolation.

In response to the growing need for human contact and as a means to mitigate loneliness and social isolation, several applications designed to foster friendship have emerged, such as Bumble For Friends, Meetup, and Nextdoor, among others. These digital tools seek to facilitate the creation of meaningful bonds based on common interests, promoting new relationships at different stages of life. In addition, they contribute to reducing emotional and social barriers by adapting to modern styles of interaction, where the first contact occurs online but with the ultimate goal of transferring these connections to the face-to-face environment and strengthening interactions in the real world. As highlighted on Bumble's official website, "Bumble For Friends is a space for creating friendly connections in a safe, inclusive and respectful environment. In order to foster healthy and equitable relationships, we hold our members accountable for how they treat each other."

The official platforms of these applications highlight numerous benefits that go beyond simply making new friends. One of the main aspects highlighted is the positive impact on emotional well-being and the mitigation of social isolation. Several studies have shown that maintaining a wide social circle and close interpersonal relationships contributes significantly to psychological well-being and reduces the risk of disorders such as depression and anxiety, as well as preventing other mental health-related conditions (Hawley & Cacioppo, 2010). In this sense, these applications offer a tool to build and strengthen social networks that can act as a buffer against everyday emotional challenges.

On the other hand, the development of social skills and empathy is also favored by the use of these platforms. Engaging with individuals outside the immediate circle of friends allows people to step out of their comfort zone, fostering the acquisition or recovery of essential social competencies, such as maintaining a conversation, facing potentially uncomfortable situations, and navigating complex social interactions. These skills are not only useful in forming friendships, but also have applications in other areas of life, such as the work environment, studies, and family relationships. Furthermore, according to Batson (2009), interacting with people from diverse contexts allows for the practice of perspective-taking, a fundamental ability for the development of empathy and mutual understanding.

Access to greater social diversity is another key benefit of these applications. By eliminating geographical and social barriers, these platforms facilitate interaction between people from different cultures, backgrounds, and contexts. This not only enriches personal experiences but also contributes to reducing prejudice and promoting social acceptance. As mentioned by Pettigrew and Tropp (2006), intergroup contact is a determining factor in reducing stereotypes and fostering a more inclusive and tolerant society. Therefore, these digital tools not only benefit users at the individual level but also have the potential to promote collective values that reinforce social cohesion.

In summary, friend-meeting applications represent an innovative

response to contemporary challenges related to isolation and the need for human connection. Their contribution to emotional well-being, the development of social skills, and the promotion of social diversity reinforce their relevance in the current context. By facilitating meaningful encounters and fostering relationships based on respect and inclusion, these platforms not only positively impact the lives of individuals but also contribute to the strengthening of a more connected and empathetic society.

From the perspective of the companies founding these applications, these tools are presented as the best option for connecting people and offer supposedly undeniable benefits. However, in order to carry out a balanced analysis, it is also necessary to address the detriments that these platforms may entail, especially in relation to the social fragmentation and superficiality that they seem to perpetuate.

One of the most relevant negative points is the handling of personal information. In the digital context, the information we share ceases to be exclusively ours and becomes part of a broader set, accessible and exploitable by third parties. These platforms depend on our information to function, arguing that it is necessary to connect people with common interests. This dynamic can be interpreted under the theory of "Common Pool Resources" (CPRs) developed by Elinor Ostrom in her work Governing the Commons. According to Ostrom, when a resource is shared and lacks adequate regulation, it can be exploited and depleted because there is no clear responsibility for its protection: "The problems of how best to govern natural resources used by many individuals in common are no more settled in academia than in the world of politics" (Ostrom, 1990, p. 1).

In this context, applications such as Bumble require users to share personal information, such as photos, to ensure an optimal experience. However, this dependency can deter some users who, not feeling comfortable sharing certain data, end up being excluded or generating distrust in other users. This significantly limits the experience within these platforms. Ostrom (1990) also warns about the phenomenon of free-riders in environments where common resources are not effectively regulated: "As long as a person cannot be excluded from the benefits that others provide, each individual will be motivated not to contribute to the joint effort and instead take advantage of the work of others" (p. 6). This parallel is useful for understanding how the absence of clear regulations on the handling of personal data can negatively impact the dynamics of social applications.

Another critical aspect of these platforms is their role in perpetuating logistical capitalism, where human relationships are treated as commodities. In The All Incomplete, Harney and Moten (2020) analyze how these human connections are optimized and managed as commodities to maximize the time users spend on the platform. Algorithms designed to cater to our interests, desires, and inclinations present profiles they deem "fit," thus eliminating the spontaneity that characterizes genuine interactions. As the authors point out, "Logistics is about flow and its improvement, about the procedures that will ensure this flow" (Harney & Moten, 2020, p. 19). This approach not only reduces human relationships to transactions but also denaturalizes the process of getting to know other people.

Friendship apps also pose a risk to genuine relationships, promoting a superficial and immediate ideal of connection. Harney and Moten (2020) introduce the concept of "incompleteness" to describe how human relationships are inherently imperfect and should not be forced to fit into predetermined molds. However, these platforms, by offering a seemingly limitless catalog of people, facilitate a disposable attitude toward relationships. For example, after a first encounter, a small flaw may be enough to discard the relationship and look for a new profile that fits more closely to the ideals we have built. As the authors mention: "Incomprehensible incompleteness is not so much the name of something or some place from which one tries to resist" (Harney & Moten, 2020, p. 7).

Although these applications seek to foster unity and the creation of inclusive communities, in reality they tend to promote individualization and fragmentation. On these platforms, users seek to optimize their personal presentation as if they were products, competing to "match" with profiles considered more desirable or interesting. This dynamic feeds the ego and fosters a competition to accumulate as many interactions as possible, reinforcing individuality rather than collectivity. In the words of Harney and Moten (2020): "Undercommons is really about sociality that is not based on the individual" (p. 11).

Friendship is a concept that has evolved over time, adapting to the needs and circumstances of each era. From the altruistic and spiritual ideals of Buddhism, Confucian loyalty, and Aristotelian virtues, to the structural relationships of modernity and the digital connections of Generation Z, friendship remains a fundamental human bond. Regardless of context, this social relationship reflects the universal need for connection, support, and mutual growth.

Although today it is increasingly difficult to establish friendships spontaneously as it was traditionally done, it is inherent to human beings to seek physical contact and the formation of communities. Despite the factors that influence us, such as digitalization, capitalism, and new ways of life, the complexity of relationships has increased. This forces us to adapt to the social changes in which we are immersed, and in this context, the use of applications to find friends presents itself as an indispensable solution. These platforms offer significant benefits, but also pose serious drawbacks.

From the problem of handling personal information to the instrumentalization of human relationships as consumer goods, these platforms perpetuate a logic of superficiality and individualism. Moreover, they jeopardize the spontaneity and authenticity of human relationships, replacing them with interactions optimized by algorithms. While this tool may offer benefits in terms of accessibility and connection, it is essential to reflect on the inherent risks that its use implies and to encourage a critical approach toward its impact on society. Technology is a powerful tool, but it must be used consciously and responsibly to preserve the authenticity and depth of human relationships.

Main   Bibliography:
Guattari, F. (2000). The three ecologies (I. Pindar & P. Sutton, Trans.). Athlone Press. (Original work published 1989)
Ostrom, E. (1990). Governing the commons: The evolution of institutions for collective action. Cambridge University Press.

Harney, S., & Moten, F. (2020). The all incomplete. Minor Compositions.

Secondary   Bibliography:

Krishnan, O. (1999). Beyond National Boundaries: Towards an Internet Society. Sociological Bulletin, 48(1/2), 275–283. http://www.jstor.org/stable/23619945

EVE, M. (2002). Is friendship a sociological topic? European Journal of Sociology / Archives Européennes de Sociologie / Europäisches Archiv Für Soziologie, 43(3), 386–409. http://www.jstor.org/stable/23998867

Dreher, J. (2009). Phenomenology of Friendship: Construction and Constitution of an Existential Social Relationship. Human Studies, 32(4), 401–417. http://www.jstor.org/stable/25652836

Paine, R. (1969). In Search of Friendship: An Exploratory Analysis in "Middle-Class" Culture. Man, 4(4), 505–524. https://doi.org/10.2307/2798192

Fortenbaugh, W. W. (1975). Aristotle's Analysis of Friendship: Function and Analogy, Resemblance, and Focal Meaning. Phronesis, 20(1), 51–62. http://www.jstor.org/stable/4181951

Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, S., & Wang, X. (2016). Online and offline relationships. In How the World Changed Social Media (1st ed., Vol. 1, pp. 100–113). UCL Press. https://doi.org/10.2307/j.ctt1g69z35.14

FRIENDSHIPS APPS
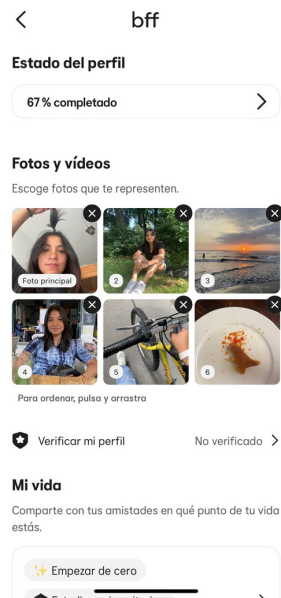
fig. 1,2,3. Abigail Troya (2025)

SARA LLOZANA

Instagram Feed

Instagram is a widely-used American social networking service and its main focus is photo and video sharing. This app which is owned by Meta Platforms, enables users to apply filters, upload media, and categorize content using hashtags or tags (Wikipedia contributors, 2024).
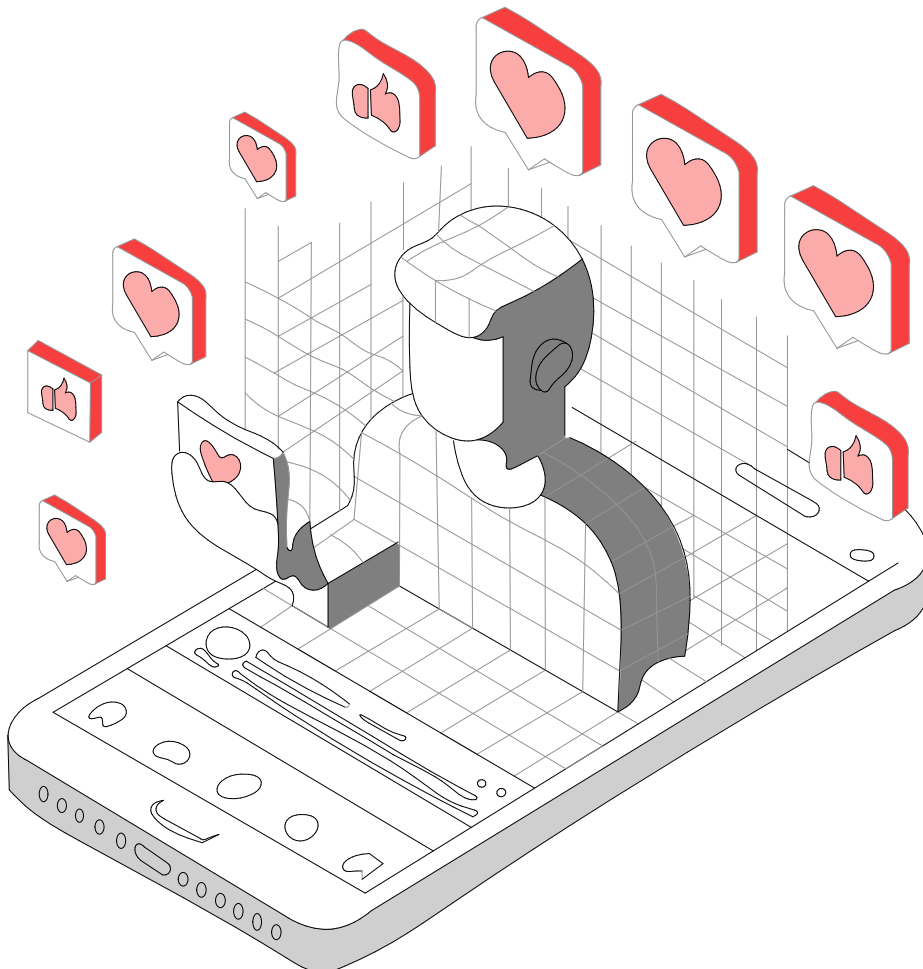
Instagram Feed

Nowadays, social media plays a really important role in our lives. This digital pattern such as Instagram, shapes how we interact, present ourselves and also how we connect with others in the digital age. Acting as a curated stream of visual content, it serves as both social network and economic engine, leveraging user-generated content to sustain its role in the attention economy. Each user is allowed to post all forms of media such as images, videos or reels and users can interact with one another through a mechanism, where the main key engagement tools are likes, comments and shares. This design showcases individuals and brand profiles, but at the same time fosters a sense of community. The algorithm ensures that users are regularly exposed to content that captures their attention, which leads to maximising time spent on the platform. Every profile, post and interaction becomes part of the bigger picture such as a larger ecosystem and the goal is to encourage participation and generate data. This has a direct influence on the way each individual crafts their online personas and interacts with the audience, often shaping our digital identities. This powerful tool has its own advantages when it comes to expression but how is it affecting our lives?

At the core of the Instagram feed lies an algorithm that determines the visibility of content based on engagement metrics such as likes, comments and shares. Not only does this system maximize attention by prioritizing posts that align with user interests but it triggers further interactions. This mechanism shapes what users see and the algorithm plays an active role in setting trends, as a result only popular content has priority and less conventional or emerging voices are overshadowed. Users strategize their posts to optimize visibility by choosing peak engagement times, aligning with trending topics or adopting favored formats like reels.
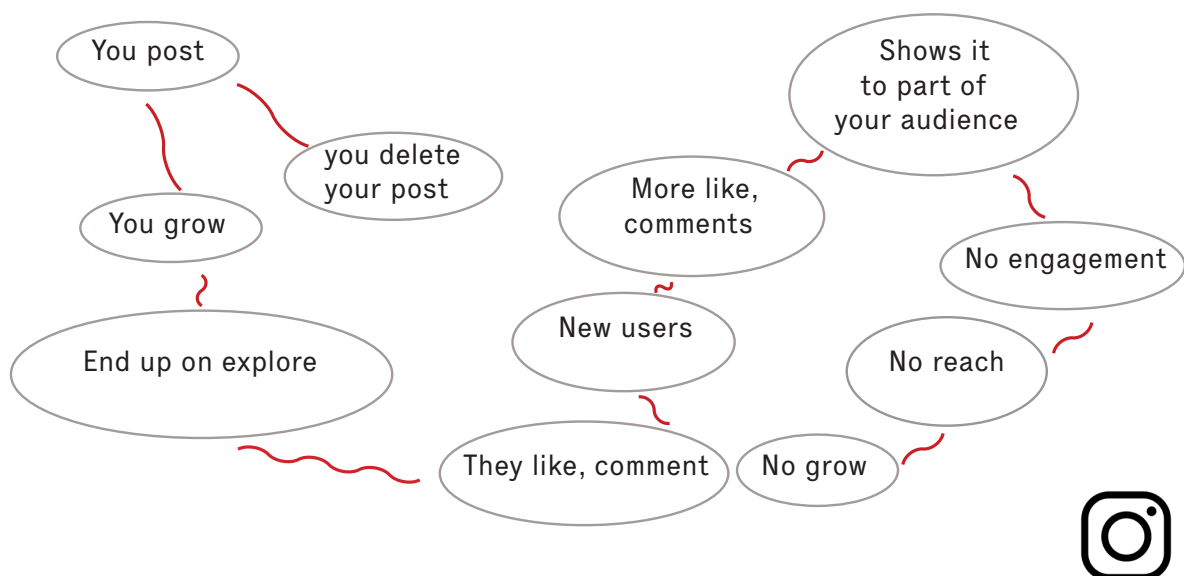
fig. 2: Algorithm of Instagram feed, Nelson, 2022

This phenomenon inevitably creates a shift from genuine self-expression to labor performed activity on the platform, turning users into contributors to an economic system of content production and this personal creativity results in unpaid digital labor (Terranova, 2004). Unlike traditional forms of labor, these platforms leverage creativity without providing compensation to users, reflecting broader patterns of inequity and unfair labor practices often seen in the gig economy and as a result, these people are seen as „The invisible workers" (Deamer, 2020). It might not be directly visible, but all these photos, videos, stories shared on Instagram feeds require time, effort and creativity. Users invest in every little detail for a post to appear as appealing as possible. They invest in crafting their posts, writing hashtags or engaging captions, in order to maximise reach and interaction. These platforms manipulate behaviour to optimize engagement, transforming feed into a profit- driven mechanism (Terranova, 2004). People who are considered to have a normal amount of followers, do not view their activity as work because instagram frames it as self-expression or entertainment media and these people are a big fraction of the user base compared to influencers who are compensated for their content, but still represent a small percentage of the users.
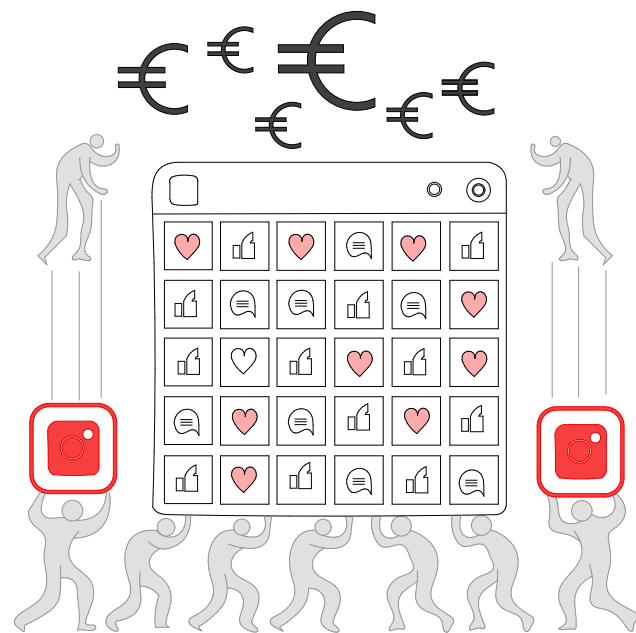
fig. 3: Illustration of unpaid labor through instagram, Llozana, 2024

It might seem like this virtual space can make people feel liked and wanted by everyone, but no one speaks about the emotional cost that it has on people. Constant striving to be or act a certain way often carries an emotional cost. Users trying to reach a certain „ideal" amount of engagement when it comes to likes, comments, shares experience stress, anxiety or burnout, especially when their effort does not yield expected validation, so this mirrors the pressures seen in traditional forms of precarious labor, where workers must constantly perform to meet external standards without job security or fair compensation (Deamer, 2020).

What if these amounts of likes, comments and shares would determine our choices in life and our part in society? Would that be a fair option for all? Nowadays having social media is an unspoken rule in order not to feel left out. This form of entertainment has become part of our daily lives. What would happen if our place in the world would be measured by the likes we get on social media? Imagine walking through a city, in a world where everything looks perfect but in reality, the society itself is dystopian. Where the world itself is bathed in pastel tones, reflecting a very polished environment, in which imperfections are unwelcome. In this world where you should keep all your negative thoughts and genuine opinions to yourself, what was once important becomes unimportant.

Every individual carries a digital display above their head revealing all the likes, comments and shares they accumulated online. This „Curated World" would exist, where social media ratings would dictate every aspect of life when it comes to social status, personal life or job opportunities. In this case, people would be seen as a matter of numbers. Human values would be seen only as a superficial aspect and beauty would prevail on top of everything. These human connections would be for the sake of appearance, every connection would lead to a temporary bond. Improving looks becomes an obsession and the goal is to increase those likes, comments, and shares day by day. People get so stuck on virtual approval, that they forget about genuine human interactions and connections.

This is a life where working hard is not even important, but your class status is defined by these tools and reachs that you achieve at the end of the day. Intelligence remains only a useless term, but likes, comments and shares become a great support in creating a rigid hiearchy, where people that are higher-rated enjoy privileges denied to others. In order to get an apartment, to provide the essentials for oneself, for someone to be part of a group of people, for people to access transportation, healthcare and better housing, one has to reach their top amount of engagement. One day you achieved everything, you reached your goal. Out of nowhere, you made a small mistake and in a second you lost all you created in days, weeks and months. Suddenly, you get frustrated, angry and you feel lost and hopeless. In this life, where you thought you could control everything, how quickly did the image you constructed, crumble?

This thought experiment also mimics real-world dynamics, where systemic inequality and how societal structures often reward superficial qualities over substance, where worth is quantified by metrics such as likes, comments, shares and savings. It is not a matter of how we see ourselves, but it has become a matter of only how people view us depending on superficial ratings and rankings. People tend to feel pressure tied to the external validation and aesthetic ideals. Are we equating self- worth with public approval?

These social metrics and algorithms that are used, create conditions where individuals are measured and validated through continous improvement systems, leaving little room for authentic self- expression and that inevitably reshapes societal flows and individual validation processes (Harney& Moten, 2021).

All of these elements that make our Instagram feed so appealing to the eye create a bigger pattern. Each element that we see on this platform contributes to how users present themselves and interact with others. Our instagram feeds serve as an identifier of what we like, what we do and what we try to show to others.
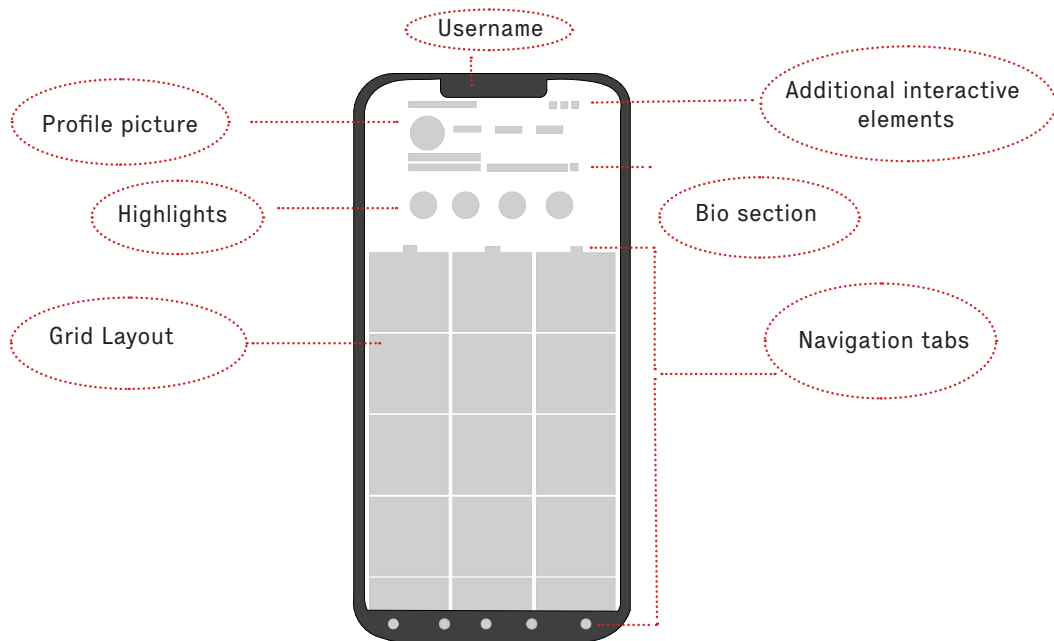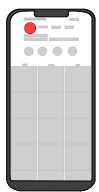

fig. 4: Features of Instagram feed, Llozana , 2025

fig.5:
Profile pic,
Llozana,2025

The profile picture has the form of a circle and is positioned at the top-left corner of the screen. It is the most prominent identifier for a user on instagram. People can click on the icon and the picture gets bigger, in order for viewers to get a closer look at who they want to follow, it can either be a personal account, business or organization. Users can either keep their profile visible to everyone and make it public or they can decide to keep it private and share their posts only with their followers. If the users have an active story, around the profile picture a colored ring will appear, signaling clickable content.
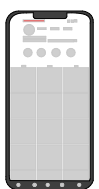
fig.6:
Username,
Llozana,2025

The username is displayed on the upper part of the profile picture and it acts as a primary identifier for the account. People can choose if they want to reveal their whole identity or put a nickname instead in order not to be recognizable. This serves as a key point for navigation and searchability, forming the foundation of the user's digital identity. The user can be tagged in comments, posts and stories, allowing others to engage with the account.

INSTAGRAM FEED
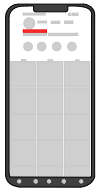
fig.7:
Bio section,
Llozana,2025

Another important aspect of the feed is the bio section, which consists of multiple text lines below the username. People usually tend to write brief texts describing themselves, their brand or their interests. The main purpose of it, is to introduce the user to profile visitors, often including a mix of personal, professional or creative details. One can include hashtags for personalization or emojis. Businesses usually add links as a way of marketing or a contact button, in order to enhance accessibility.
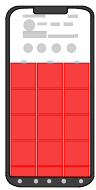
fig.8:
Grid,
Llozana,2025

The grid layout (3×N Arrangement below the highlights) visually takes the most dominant part of the profile. It consists of a collection of posts in rows of three. People see it as a visual portfolio, demonstrating the user's posts and providing a glimpse of their content and aesthetic. Each grid square represents a post such as a photo or video. People can post as much content as they want and the posts are arranged in reverse chronological order, so the newest are at the top row.
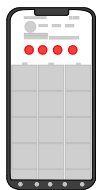
fig.9:
Highlights,
Llozana,2025

Highlights are also a feature that shapes the profile of people. They are situated underneath the bio. When people post on their stories, they are able to save their content and they directly appear on the highlights for as long as the user wants to make them visible. Highlights in the stories, extend the 24- hours lifespan, which allows users to present important content. Users can customize and design their highlight covers to match their preferences. On the highlights, people tend to to categorize specific themes such as travel, hobbies or events.
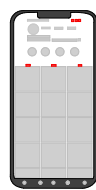
fig.10:
Additional
elements
Llozana,2025

Instagram profiles provide navigation tabs for different types of content such as posts, reels and tagged pictures. They are very important in or -der to access additional layers of the profile. The Posts tab displays the main grid of the content. Reels tab focuses on the short- form video content, which is a type of animation. The tagged photos tab shows posts where the user has been tagged by others. Additional interactive elements are the setting menu (three dots icon) and activity, threads and new app connected to instagram (displayed with @) and the ikon shown with +, which helps the user to create their content. Tools such as edit profile and share profile help also in developing one's feed. The edit profile helps to costumize various elements of their feed depending on needs. Share profile option is a feature that helps users promote or share their instagram account with others, both on and off the platform.

While the feed provides an overarching framework that showcases multiple pieces of content as a cohesive whole, each post functions as a foundational unit within the structure. It is at this level that the details of content creation, user interaction and engagement come into focus. By analyzing reels and posts, we can better understand how smaller components- such as visuals, captions and engagement features- work independently and contribute to the larger patterns and dynamics of the platform. All these elements serve as a chain in shaping the overall user experience on instagram.
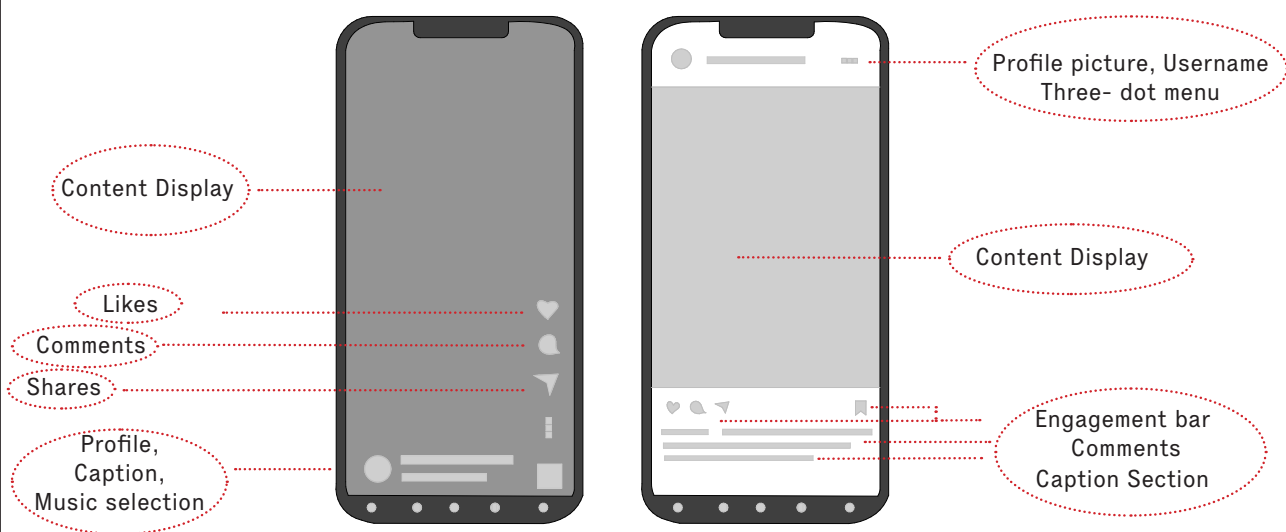
fig. 11: Post and reel, Llozana, 2025

A reel is basically a video and it occupies the majority of the screen to maximize focus on the content. Usually, it is from 15 to 90 seconds long. Users can create their videos however they want to by putting music, filters and special effects. It can also be a sequel of pictures put together in order to create an animation, in order to grab and hold the viewer's attention.

fig.12&13: Engagement tools, Llozana,2025

On the bottom part of the reel is the profile picture, that represents the actual author of the reel. The caption serves as a description provides additional context, storytelling or hashtags for the Reel. Audio attribution, displays the name of the audio track or music used in the reel and helps by also encouraging trends.

The engagement bar is at the right vertical column and contains the main tools such as the heart icon (likes), comment bubble icon and share icon. Users can express their approval, appreciation for the reel by liking the content. If they want to express an idea, users can comm -ent on the reel and the comments will be visible to all. The share icon enables users to share the Reel via direct message or post it to their story/feed. All these „instruments" allow interaction, increase visibil -ity and provide metrics for creators to measure engagement.

Instagram posts offer users a focused way to present individual moments or ideas, transitioning from the broader structure of a profile to specific, stand-alone content.

fig. 14:
Profile,
Llozana, 2025

On instagram the means to identify yourself remain the same, which is the profile picture and the username. This feature is situated at the top of the page and as previously mentioned, it identifies the post's creator, providing a direct link to their profile, if you press on it. This very important tool establishes credibility and context for the content. The three dots menu (top right) opens a menu of additional options such as reporting the post, sharing it externally, unfollowing the user, etc.

fig. 15:
Post,
Llozana, 2025

Underneath these main tools, there is the post as a content display, which takes up the most space on the feed and has the main importance. On the post, users can not only put countless images, but also videos in order to use it as their primary medium for storytelling, promotion or creativity. Since instagram is a visually-driven platform, this is the best method in order to capture the viewer's attention.
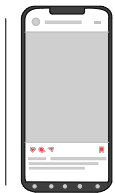
fig. 16:
Engagement
bar,
Llozana, 2025

The engagement bar remains the same as the reel, meaning that the heart icon serves in order to like a post, comment bubble icon allows users to leave public remarks or feedback, share icon which enables to share the post via direct messages and external platforms which increases the post's reach and visibility. The Bookmark icon lets users save the post for future reference, organizing it into personal collections.

fig. 17:
Caption section,
Comments,
Llozana, 2025

Below the engagement there is the caption section which is the text acco--mpanying the visual content and adding context to the image or video. Underneath are the comments from other users and the user itself can pin notable comments to the top of the section for visibility. The time stamp shows when users post their content and it adds transparency and encourages engagement with both new and older posts.

To address the challenges and dynamics analyzed in the instagram feed, including its problems of external validation, unpaid digital labor and algorithmic pressures, several solutions can enhance user experiences, promote authenticity and maximize Instagram's utility for practical applications.

One crucial point that people should consider is user education politics. We are so keen on following the mass, that we forget that at the end of the day we have a choice and it is up to users, to decide how to use the information that we gather daily on different topics, according to our likings and needs. Instagram could introduce educational prompts to explain how content visibility is determined. Understanding these mechanisms and maybe also allowing users to prioritize their content depending on close connections or niche creators rather than viral trends, could shift the focus on building genuine connections and interests. This way, these mechanisms could alleviate user frustrations tied to engagement metrics.

Not only educating users on how the algorithm works is important, but also recognizing unpaid digital labor, makes the users get the best out of this social platform. Instagram's reliance on unpaid user contributions perpetuates a significant imbalance. A tiered reward structure could offer benefits to activate contributors, such as increased visibility, exclusive features or monetary rewards. In order to adequately reward all users and boost their creativity equally, recognizing digital labor should be a crutial aspect.

These platforms such as instagram should be a mean for people to enjoy their free- time or have a distraction from their hectic daily life, not an emotional strain. Instagram should integrate mental health features, commodifing attention is a way to remind users when to have a break and have a healthier way of approaching the platform in order to avoid burn-out. Due to the emotional exhaustion state that Instagram can lead users to, the need to grow awareness within platform economies should be very crucial. We should consider alternatives that prioritize societal well-being, over corporate gain.

Although instagram is mostly seen as a form of entertainment, people should also consider its utility in other forms. For example, Zuboff (2020) advocates for a future where technology serves humanity rather than exploiting it. There is a need to balance innovation with ethical responsibility, ensouring that technological progress contributes to collective welfare rather than exploitation and societal harm. This platform can be seen as an essential infrastructure for diverse economic activities, such as housing and services. Such platforms should be also used in a multifunctional way, in order to facilitate people's needs. People who are in search of apartments would be able to explore a lot of varieties in such digital spaces, instead of paying crazy amount of money to real estate agencies. Opening instagram profiles that are dedicated to different access to housing options, would facilitate accessibility and community engagement. Instead of waiting for days in order to get a reply from your real estate agent, you would have to wait less by taking a few minutes of your time to send them a message through direct messages. This way, this platform can extend its utility to real-world applications and serve as a better mean of communication for all.

SARA LLOZANA

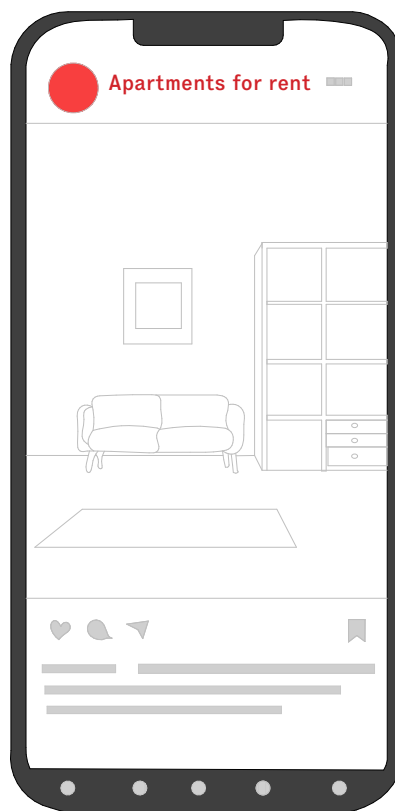# Instagram Feed

fig. 18: larger pattern, Instagram seen as an economic activity, Llozana, 2025

SARA LLOZANA

<u>Instagram Feed</u>

References:

Wikipedia contributors. (2024, December 27). Instagram. Wikipedia. https://en.wikipedia.org/wiki/Instagram

Terranova. (2004). Network Culture Politics for the Information age. Tuwel. https://tuwel.tuwien.ac.at/pluginfile.php/4148729/mod_folder/content/0/Network%20Culture%20Politics%20for%20the%20Information%20Age.pdf

Peggy Deamer. (2020). Architecture and labor. TUWEL. https://tuwel.tuwien.ac.at/pluginfile.php/4148729/mod_folder/content/0/Architecture%20and%20Labor.pdf

Stefano Harney And Fred Moten. (2021). All incomplete. TUWEL. https://tuwel.tuwien.ac.at/pluginfile.php/4148729/mod_folder/content/0/11.11.%20-%20All%20Incomplete.pdf.

Sadowski. (2020). https://tuwel.tuwien.ac.at/pluginfile.php/4148729/mod_folder/content/0/09.12.%20-%20Too%20Smart_%20How%20Digital%20Capitalism%20is%20Extracting%20Data%2C%20Controlling%20Our%20Lives%2C%20and%20Taking%20Over%20the%20World.pdf. Tuwel.

List of figures:

Fig 2: Nelson, D. (2022, 20. August). How instagram algorithm works. Pinterest. https://at.pinterest.com/pin/2462974788721187/
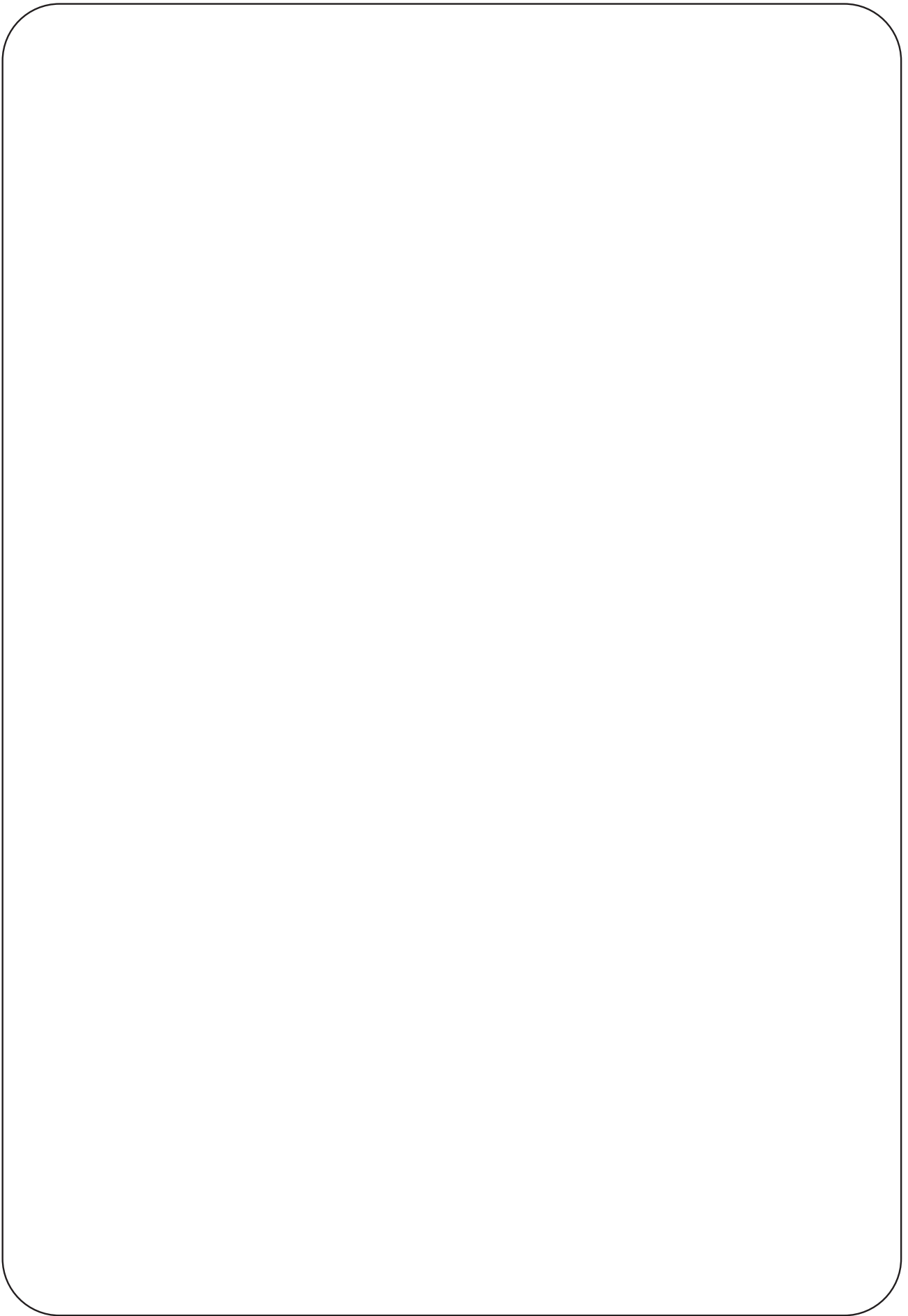
Fig 1- 18: own work

BESJAN BYTYCI

TIK TOK Feed

TikTok's feed is a groundbreaking digital pattern that reshapes cultural production and user interaction, blending personalized algorithms with addictive short-form content. It democratizes visibility and creativity, yet provokes critical debates on its role in amplifying trends, shaping societal norms, and fostering algorithmic dependencies.
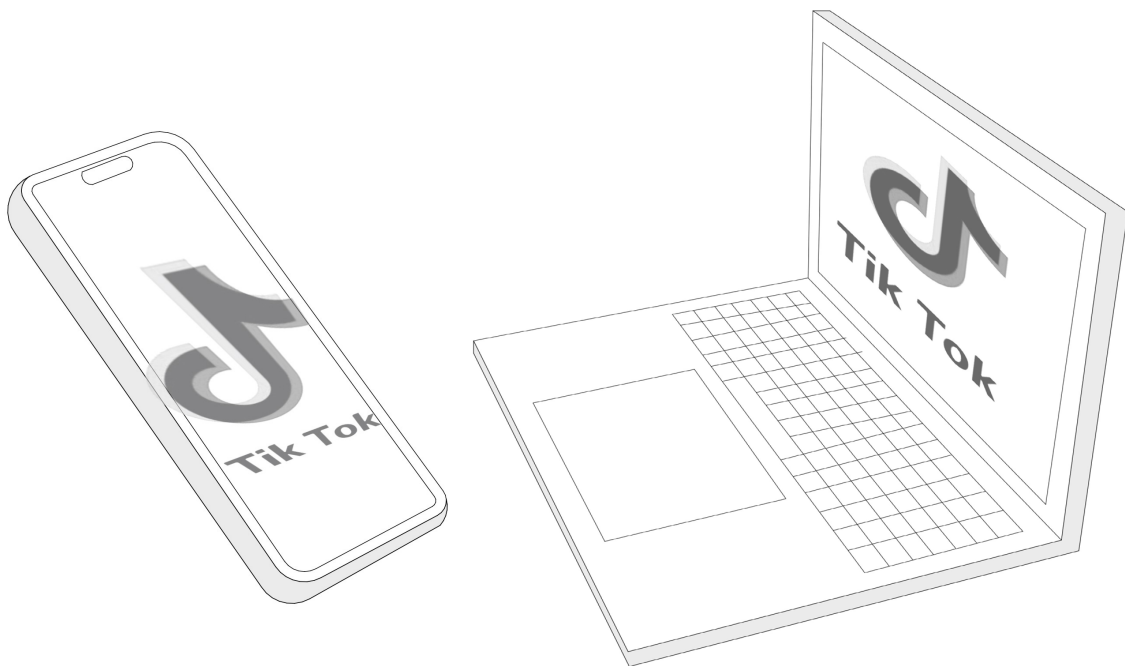
TIK TOK Feed

TikTok is one of the fastest-growing social media platforms globally, attracting over one billion active users monthly. The platform allows users to create and share short videos, typically set to music or audio clips, which can range from comedic skits to educational content. Its interface is designed for vertical scrolling, offering a personalized feed tailored to user preferences and behaviors. The algorithm that powers this feed curates content based on individual interactions such as likes, shares, and watch time, creating a highly engaging and immersive experience.

TikTok is widely used across the globe, with significant user bases in regions such as North America, Europe, and Asia, particularly among younger demographics like Generation Z and Millennials. It has become a hub for various purposes, including entertainment, marketing, education, and activism. Users leverage the platform to showcase talents, promote businesses, share knowledge, and even drive social movements. The app's flexibility in accommodating diverse content formats—from quick tutorials to elaborate storytelling—makes it versatile for creators and audiences alike.
The platform's impact on individuals is multifaceted. It fosters creativity and self-expression by providing accessible tools for video editing and content sharing. TikTok's algorithm enables users to achieve visibility and, in some cases, virality, even with limited resources, leveling the playing field for content creators from diverse socioeconomic backgrounds. However, the constant pursuit of likes and engagement can have psychological effects, such as heightened anxiety, reduced self-esteem, and addictive behaviors. Studies suggest that the platform's endless scrolling mechanism and dopamine-triggering content cycles contribute to screen-time dependency, particularly among younger users.

In addition to personal impacts, TikTok has reshaped digital marketing and advertising. Brands and influencers capitalize on its vast reach to engage with audiences through sponsored content, product placements, and creative campaigns. Hashtag challenges, one of the platform's signature features, have proven to be powerful tools for brand promotion, encouraging user participation and organic content generation. Furthermore, TikTok has played a pivotal role in democratizing education and information dissemination. During global events such as the COVID-19 pandemic, it became a critical platform for spreading awareness, offering mental health support, and facilitating virtual communities.
This digital architecture has made TikTok a dominant player in the attention economy, where user engagement drives value and revenue generation. However, the platform's rise also underscores the complexities of algorithmic governance, data commodification, and cultural production in the digital age. TikTok's ability to democratize content creation, allowing users from diverse backgrounds to achieve visibility and virality, is both celebrated and critiqued. While it has fostered creativity and connection, its design also raises concerns about privacy, mental health, and the sustainability of digital culture.
Problem

TikTok's interface is uniquely designed to minimize friction between the user and content consumption. Its „For You" page, driven by a highly sophisticated algorithm, plays an instrumental role in shaping user experiences. By prioritizing content that aligns with user preferences, the platform creates a personalized digital environment that enhances engagement. This personalization is achieved through advanced machine learning models that analyze user behavior, including viewing patterns, likes, comments, shares, and even the amount of time spent watching specific types of videos. Such an approach ensures a seamless flow of content that caters to individual tastes, effectively keeping users immersed in an endless loop of entertainment.

One of the key challenges posed by this design is its ability to influence user behavior and shape cultural trends. TikTok's algorithm not only identifies content preferences but also reinforces them by consistently pushing similar videos, creating an echo chamber effect. While this enhances user satisfaction and engagement in the short term, it limits exposure to diverse perspectives and reduces the variety of content consumed. This dynamic is particularly problematic when it comes to content that challenges prevailing norms or introduces complex, thought-provoking ideas. Instead, the algorithm heavily favors content that provides immediate gratification, such as humor, trending dances, and easily digestible visual storytelling.

From my personal experience as a content creator on TikTok, I have observed that videos with funny or humorous content tend to perform significantly better in terms of views and engagement compared to those showcasing beautiful places in Vienna. While the humorous videos often go viral, offering little more than entertainment value, the ones highlighting Vienna's landmarks or cultural sites tend to attract less attention. Meanwhile, content centered around what one can do in Vienna for free garners moderate virality, reflecting a balance between utility and relatability. These trends highlight how TikTok's algorithm favors content that immediately captures attention and aligns with trending formats, often sidelining educational or artistic value.

The platform's design encourages this behavior by prioritizing immediacy and simplicity. As a user scrolls through the endless feed, each video is automatically played, immersing the viewer in a highly engaging loop. This structure minimizes cognitive effort, making it easy for users to consume large volumes of content in a short time. TikTok's feed is carefully curated to keep users engaged for as long as possible. The addictive nature of this design is not accidental but a deliberate feature aimed at maximizing user retention and interaction. It exploits psychological mechanisms such as variable rewards, where users receive intermittent dopamine hits from engaging or surprising content, making it harder to disengage from the app.

For creators, understanding these dynamics is crucial. My viral content—primarily humorous videos—illustrates the importance of aligning with the platform's preferences. However, the limited virality of more informative or artistic videos reveals a tension between user interests and algorithmic amplification. Creators who prioritize depth, originality, or educational value often find it challenging to gain traction, as their content competes with the more visually striking or emotionally resonant videos that dominate the feed. This creates a paradox where creators must balance their creative integrity with the need to cater to algorithmic demands.

TikTok's algorithm operates through a sophisticated feedback loop designed to maximize user retention. When a video gains traction, the algorithm ensures it is pushed to a wi-

der audience by appearing on the „For You" page—a feature central to TikTok's appeal. This dynamic fosters a winner-takes-all environment, where a small subset of videos achieves extraordinary reach, while most content remains unseen. The algorithm's reliance on engagement metrics such as likes, shares, and comments often results in a skewed representation of content quality, as sensational, humorous, or emotionally charged videos outperform nuanced, thoughtful, or niche creations.

This structure mirrors broader economic systems discussed in „Platform Capitalism" [2], where platforms extract value through concentrated attention economies. By prioritizing highly engaging content—often humorous or emotionally resonant—TikTok creates a landscape where content creators are incentivized to prioritize virality over depth or originality. The algorithm's bias toward content that generates high engagement also has implications for cultural production, as it elevates trends and formats that conform to its metrics, potentially stifling innovation and diversity in content creation.

The problem is further compounded by the platform's role in perpetuating social and cultural inequalities. Creators from underrepresented backgrounds or those who produce content that deviates from dominant aesthetics often struggle to gain visibility. This is exacerbated by the algorithm's opacity, which makes it difficult for creators to understand why certain videos succeed while others do not. As a result, TikTok's algorithmic design not only shapes user behavior but also reinforces existing hierarchies in cultural representation, amplifying voices that align with mainstream trends while marginalizing others.

Ultimately, TikTok's design and algorithmic operations raise significant questions about the trade-offs between engagement and meaningful content. While the platform excels at capturing attention and fostering creativity, its reliance on a narrow set of metrics to determine content visibility limits its potential as a space for diverse and reflective interactions. The prioritization of immediacy and simplicity over depth and variety highlights the challenges of balancing user satisfaction with the broader cultural and ethical implications of algorithmic governance.

The commodification of user attention is a defining feature of TikTok's operational model. By analyzing user behaviors, the platform's algorithm creates a feedback loop designed to maximize engagement. This approach aligns with insights from „The New Spirit of Capitalism" [1], where economic systems adapt to integrate individuality and creativity into commodified structures. TikTok's personalized feed generates immersive experiences but also fosters dependency, as described in „Too Smart: How Digital Capitalism is Extracting Data, Controlling Our Lives, and Taking Over the World" [3]. Users are drawn into a cycle of passive consumption, limiting their critical engagement with content and reinforcing addictive behaviors. Additionally, TikTok's focus on short-form, trend-driven videos often prioritizes virality over substantive, diverse, or reflective interactions. This phenomenon, as explored in „The Age of Surveillance Capitalism" [4], highlights the exploitation of human behavior for profit, frequently at the expense of societal well-being. TikTok's vertical feed structure exemplifies immersive digital design, where each video occupies the entire screen, minimizing distractions and maximizing user focus. As outlined in „Platform Capitalism" [2], such architectures align with the logic of extractive economies, where user data is the primary commodity. This dynamic underscores the tension between individual agency and algorithmic control. Drawing on Foucault's concept of Homo oeconomicus, discussed in „The Birth of Biopolitics" [5], TikTok positions users as both consumers and producers within its economic model. By engaging with the platform, users inadvertently commodify their behaviors, which are monetized through

targeted advertising. This dual role complicates traditional notions of agency, as users are both empowered to create and constrained by the algorithmic frameworks determining content visibility.

Culturally, TikTok's algorithmic feed has democratized access to digital creativity, enabling diverse voices to gain prominence. However, this democratization is accompanied by new forms of exclusion and gatekeeping. The algorithm's opacity often disadvantages creators who do not conform to dominant trends or aesthetics, perpetuating inequalities in representation. These dynamics reflect broader tensions in cultural production, as discussed in „Culture Class" [6], where economic imperatives frequently overshadow artistic integrity and inclusivity. The platform's emphasis on trends and virality also raises questions about the sustainability of digital culture. Guattari's „The Three Ecologies" [7] highlights how such models prioritize immediate gratification and surface-level engagement, potentially fostering a monoculture where diversity and originality are subsumed by conformity.

In analyzing my personal analytics, it becomes evident that TikTok's algorithm is designed to reward content that aligns with broader user trends. Videos that are funny or involve relatable scenarios tend to attract more likes, shares, and comments, which further boost their visibility. On the other hand, more niche content, such as showcasing Vienna's cultural or architectural highlights, often struggles to gain traction. This aligns with insights from „The Age of Surveillance Capitalism" [4], which argues that platforms engineer user behavior to maximize profitability. TikTok's preference for highly shareable and easily consumable content demonstrates a clear prioritization of engagement metrics over educational or artistic value.

The platform's global reach also introduces complex cultural dynamics. While TikTok celebrates diversity through localized content, it simultaneously promotes a homogenized aesthetic driven by trends. This duality reflects broader tensions in global cultural exchanges, as outlined in „Dark Matter: Art and Politics in the Age of Enterprise Culture" [9]. For example, while my videos about free activities in Vienna cater to a localized audience, the platform's algorithm often prioritizes universally appealing humorous content, limiting the visibility of region-specific narratives. This phenomenon underscores the need for platforms to balance global and local content strategies to support cultural pluralism.

Moreover, TikTok's algorithm operates as a form of cultural gatekeeping. It determines which content is amplified and which remains obscure. This dynamic often disadvantages creators who prioritize substance over style. For instance, my videos about free activities in Vienna receive moderate attention, indicating a middle ground where utility meets entertainment. However, even these perform below purely humorous content, emphasizing the platform's inclination toward instant gratification.

This pattern is further reinforced by the platform's emphasis on metrics such as likes, shares, and comments, which prioritize visibility over content quality. Creators often feel compelled to cater to trends, adopting styles and themes they may not naturally gravitate toward, in order to gain traction. This creates a homogenization of content, where originality and depth are sidelined in favor of widespread appeal. The algorithm's focus on virality often perpetuates stereotypes and amplifies dominant cultural norms, marginalizing alternative or underrepresented perspectives. As a result, TikTok's design not only shapes user behavior but also influences the types of cultural narratives that gain prominence.

TikTok's impact on mental health and societal well-being is another critical aspect of its analysis. The platform's addictive nature—driven by the dopamine-releasing cycle of content consumption—can lead to excessive screen time and reduced productivity. Younger users, in particular, may experience heightened anxiety and diminished self-esteem as they compare themselves to idealized representations often promoted on the app. Moreover, the rapid consumption of bite-sized content may erode users' ability to engage with more complex, long-form media, fostering a culture of superficial interaction over meaningful engagement.

Ultimately, while TikTok has revolutionized digital creativity and content consumption, it has also introduced significant challenges related to user autonomy, cultural representation, and societal health. Its operational model highlights the need for a critical examination of the trade-offs inherent in algorithm-driven platforms, emphasizing the importance of balancing engagement with ethical considerations and the promotion of diverse, high-quality content.

Addressing these challenges requires a multi-faceted approach prioritizing ethical design, user empowerment, and cultural inclusivity. Greater transparency in TikTok's algorithmic processes can mitigate concerns about data commodification and echo chambers. Providing users with insights into how their data influences content recommendations, as suggested in „Platform Urbanism and Its Discontents" [8], can foster informed engagement. Transparency tools, such as visual representations of algorithmic decision-making and real-time feedback on content amplification, could empower users to make more conscious decisions about their interactions on the platform.

Additionally, customizable algorithms could allow users to prioritize specific content types, promoting diversity and enhancing agency. For instance, users could opt to see more educational, artistic, or culturally enriching content, reducing the dominance of purely viral trends. This customization would also allow marginalized voices and niche creators to gain greater visibility within a more balanced content ecosystem. Furthermore, TikTok can adopt ethical design practices, such as algorithms that actively promote diverse and underrepresented perspectives, ensuring a more inclusive digital landscape. TikTok can also play a proactive role in promoting digital well-being by integrating features encouraging mindful usage. Examples include usage reminders, digital detox challenges, or in-app analytics showing users how their time is spent. Educational campaigns about balanced digital consumption, particularly aimed at younger audiences, can help mitigate the addictive tendencies of the platform. These measures align with recommendations in „Too Smart" [3], emphasizing the need for platforms to balance engagement with user welfare.

The algorithm's prioritization of content that is likely to generate immediate engagement over more niche or reflective content sheds light on why my humorous videos perform better than those showcasing Vienna's beauty or offering practical tips. By examining my analytics, it becomes evident that the algorithm amplifies content that aligns with broader user trends, reinforcing viral phenomena. This reflects the findings in „The Age of Surveillance Capitalism" [4], where platforms engineer user behavior to maximize profitability. Understanding these dynamics as a creator enables more strategic content planning but also raises ethical questions about the role of platforms in shaping cultural consumption.

To counteract cultural homogenization, TikTok should invest in initiatives amplifying diverse voices. Collaborations with local creators, cultural institutions, and marginalized

communities can ensure broader representation within the platform's ecosystem. „Dark Matter: Art and Politics in the Age of Enterprise Culture" [9] suggests such efforts can democratize cultural production and challenge existing power dynamics. For example, TikTok could launch localized content campaigns that highlight regional art, culture, and traditions, fostering greater awareness and appreciation for diverse narratives. Encouraging originality through creator grants, mentorship programs, and dedicated spaces for experimental content can further support emerging talents and foster diverse expression. TikTok could create exclusive creator networks focused on innovation, providing resources and training to help creators explore new formats and styles. Aligning with insights in „Artificial Hells" [10], these initiatives would nurture originality and combat the dominance of repetitive trends, contributing to a richer and more varied digital culture.

Finally, strengthening data privacy protections is crucial. Implementing robust governance policies, offering users greater control over their data, and collaborating with independent auditors can enhance trust and accountability. These measures reflect the principles outlined in „The Age of Surveillance Capitalism" [4], advocating for ethical stewardship of digital resources. TikTok could introduce data transparency dashboards, where users can view and manage how their data is used, enhancing confidence in the platform's practices.
TikTok's feed represents a paradigm shift in platform urbanism, where digital interfaces mediate cultural production, social interaction, and economic exchange. While its design fosters creativity and connection, its engagement-driven model presents significant ethical and societal challenges. Integrating transparency, inclusivity, and user empowerment into its design can transform TikTok into a more responsible and sustainable digital space. By embracing these changes, TikTok could lead the way in redefining the role of social media platforms in fostering meaningful connections and cultural enrichment. The lessons learned from TikTok's model can inform broader efforts to create equitable and meaningful digital environments. Policymakers, developers, and content creators alike can draw from TikTok's successes and shortcomings to design platforms that balance profitability with societal benefits. This expanded analysis of TikTok's operational, cultural, and ethical dimensions underscores its significance as a case study in understanding the evolving dynamics of the digital age.

TikTok has undeniably revolutionized the way people consume and create digital content, offering an innovative platform that caters to diverse interests and audiences. Its algorithmic structure has not only democratized visibility but has also fundamentally reshaped cultural production, user interaction, and digital marketing. However, this success comes with significant challenges. The prioritization of engagement metrics over substantive value has created an ecosystem that often amplifies superficial trends at the expense of depth and diversity. This dynamic raises questions about the platform's role in shaping societal norms and influencing cultural representation.
The analysis highlights a paradox: while TikTok democratizes content creation and facilitates creative expression, it also perpetuates inequalities and homogenization through its algorithmic design. Creators who strive for originality, nuance, or educational value face uphill battles in a system optimized for instant gratification and virality. Moreover, the platform's addictive nature and psychological impacts underscore the need for a more ethical approach to digital engagement.

To address these concerns, TikTok must evolve beyond its current model by adopting

measures that promote inclusivity, diversity, and digital well-being. Transparency in algorithmic processes, user-driven content preferences, and proactive measures to combat homogenization can pave the way for a more balanced ecosystem. Additionally, investments in cultural representation, originality, and robust data privacy protections will enhance TikTok's role as a responsible digital platform.

As policymakers, developers, and users navigate the complexities of platform urbanism, TikTok serves as both a model of innovation and a cautionary tale. Its successes and limitations offer valuable lessons for designing platforms that not only maximize engagement but also prioritize societal well-being and cultural enrichment. By embracing these changes, TikTok has the potential to redefine its legacy as a transformative force in the digital age, setting a precedent for future platforms to follow.

BESJAN BYTYCI

TIK TOK Feed
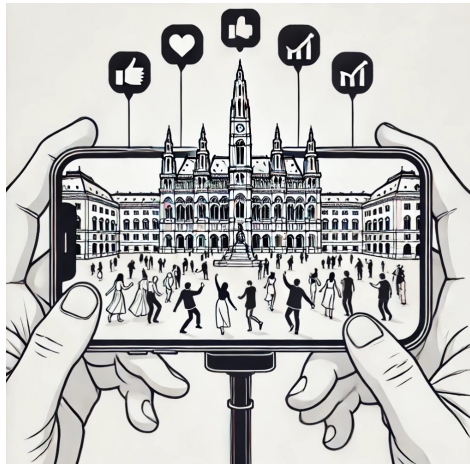
fig. 1 Tiktok's Role in Amplifying Urban Culture and Engagement Photo: Ai-generated by Besjan Bytyci 2025
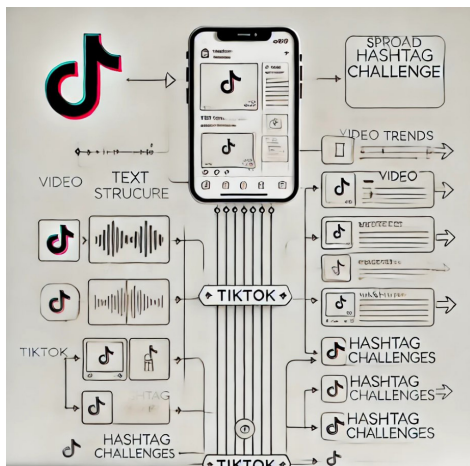
fig. 2 Tiktok Content Ecosystem and Hashtah Challenges Photo: Ai-generated by Besjan Bytyci 2025
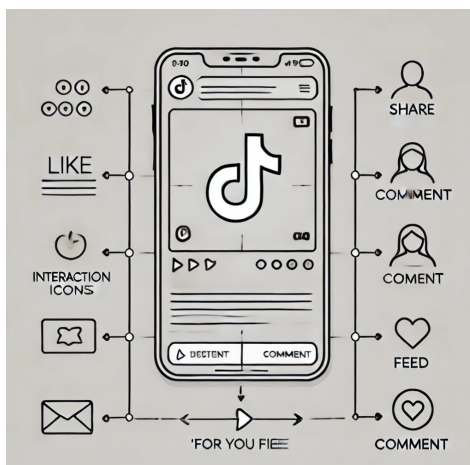
fig. 3 Social Media Engagement in Urban Spaces Photo: Ai generated by Besjan Bytyci 2025

BESJAN BYTYCI

TIK TOK Feed

TikTok User Profile and ,For You' Page Overview
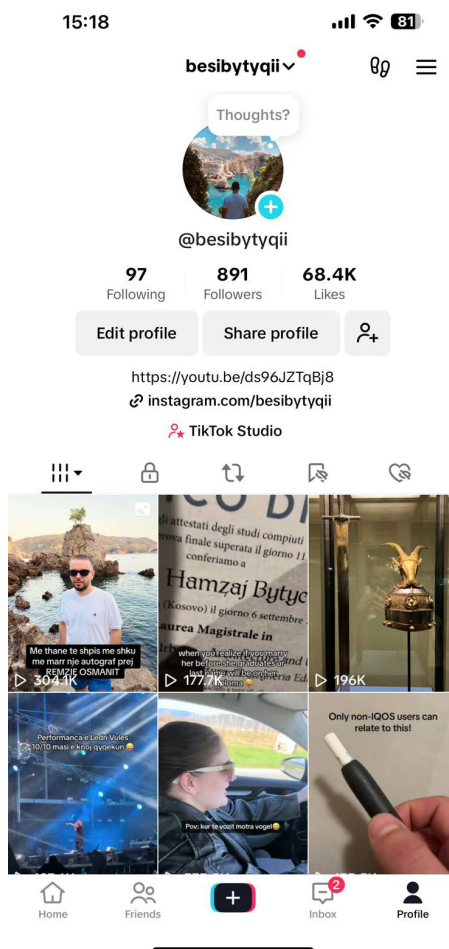
fig. 4 TikTok Profile Overview
Displays a Tiktok user profile, showcasing followers count, total likes, and video previews.
Photo by: Besjan Bytyci, 2025
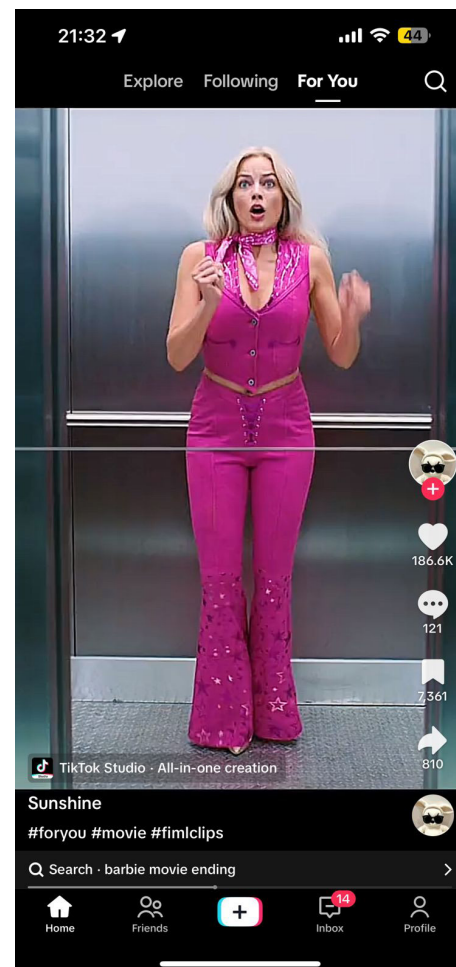
fig. 5 TikTok „For You" Page Interface
Shows how the personalized feed appears to users, highlighting engagement metrics such as likes, comments, and shares.
Photo by: Besjan Bytyci, 2025

TIK TOK Feed

TikTok Analytics and Monetization Overview
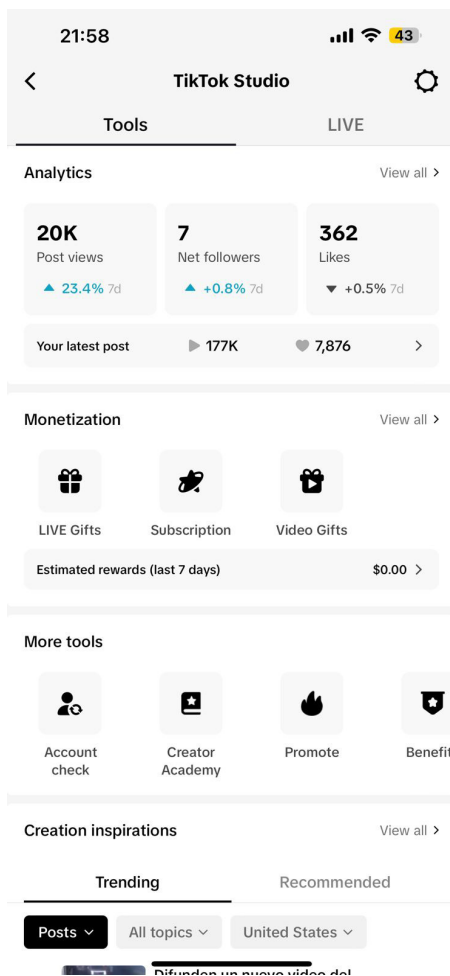
fig. 6 TikTok Studio- Analytics Dashbo-
ard, Photo by: Besjan Bytyci, 2025
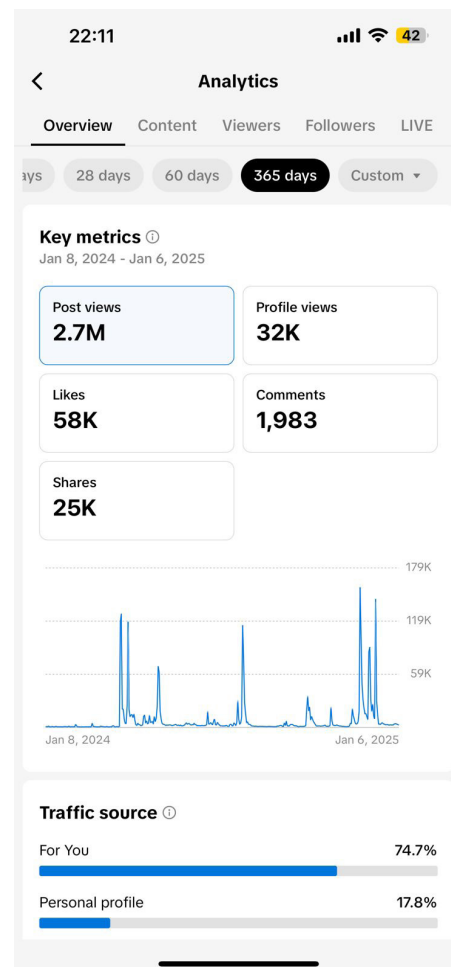
fig. 7 TikTok Analytics- 365 Day Per-
formance Overview,
Photo by: Besjan Bytyci, 2025

TIK TOK Feed

TikTok Post Analysis Overview
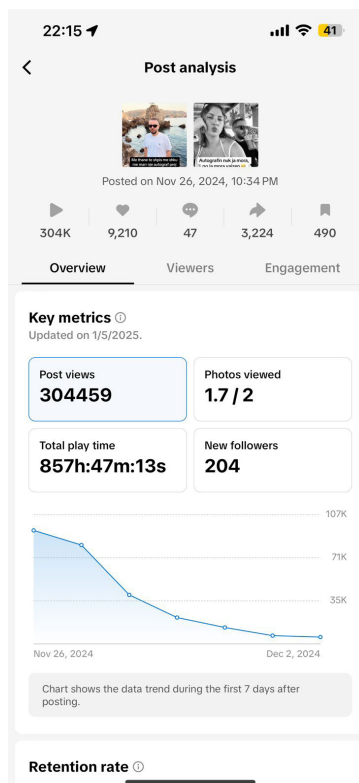
fig. 8 TikTok Post Analysis
Key Metrics
Photo by: Besjan Bytyci,
2025
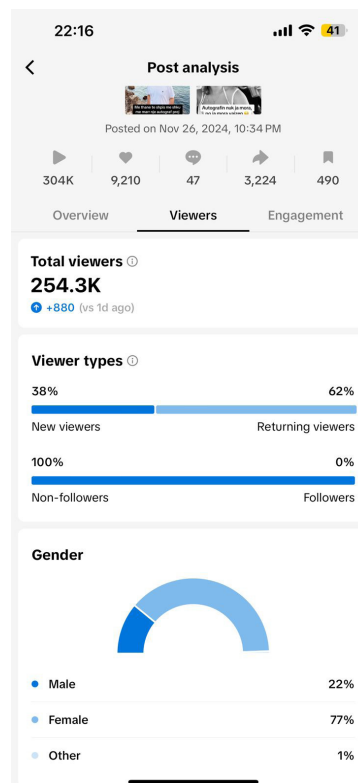
fig. 9 TikTok Post Analysis
Viewer Insigts
Photo by: Besjan Bytyci,
2025
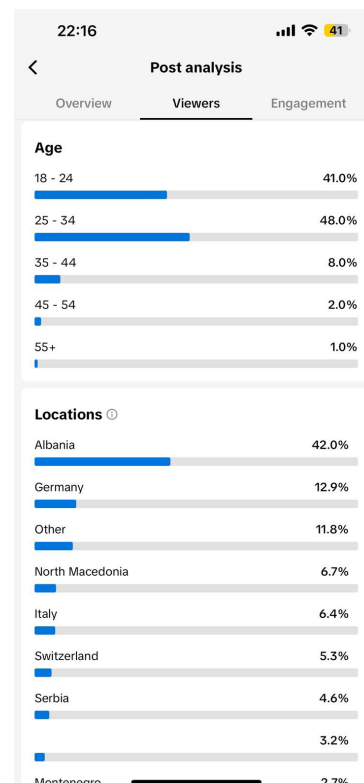
fig. 10 TikTok Viewer De-
mographics
Photo by: Besjan Bytyci,
2025

TIK TOK Feed

Personalized FYP: A Comparison of TikTok's Algorithm
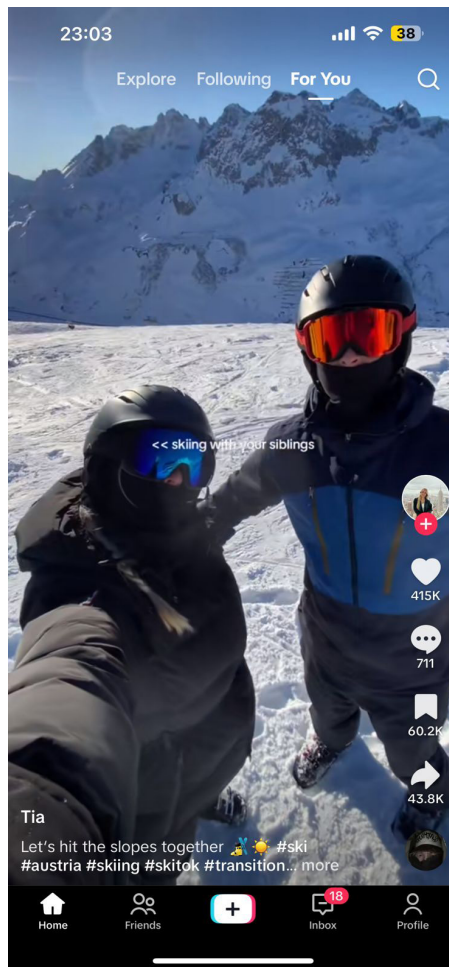
fig. 11 My ‚For You' Page featuring a skiing adventure, reflecting active and dynamic interests.
Photo by: Besjan Bytyci, 2025

fig. 12 Riola Hamzaj's FYP with an artistic quote, highlighting reflective preferences.
Photo by: Riola Hamzaj, 2025

TIK TOK Feed

Empowering Safety on TikTok: Family Pairing and Privacy Features
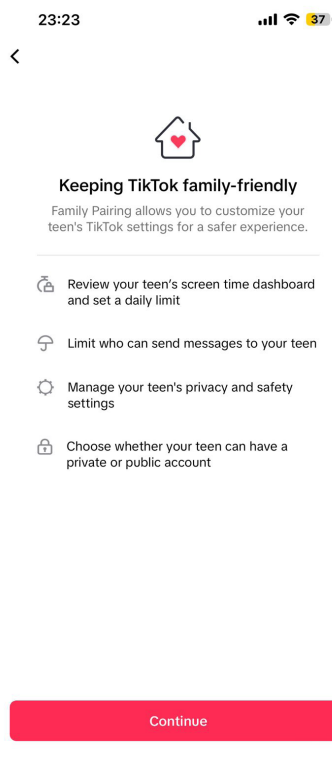
fig. 13 TikTok Family Pairing feature introduction screen, showing options for parent or teen account selection.
Photo by: Besjan Bytyci, 2025.
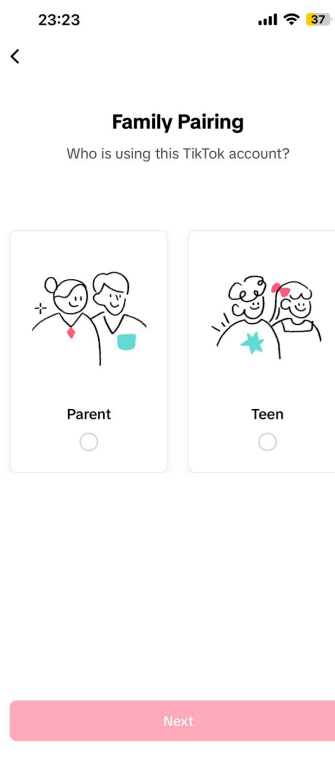
fig. 14 TikTok Family Pairing overview, highlighting customizable safety settings for teens, such as screen time management and privacy controls.
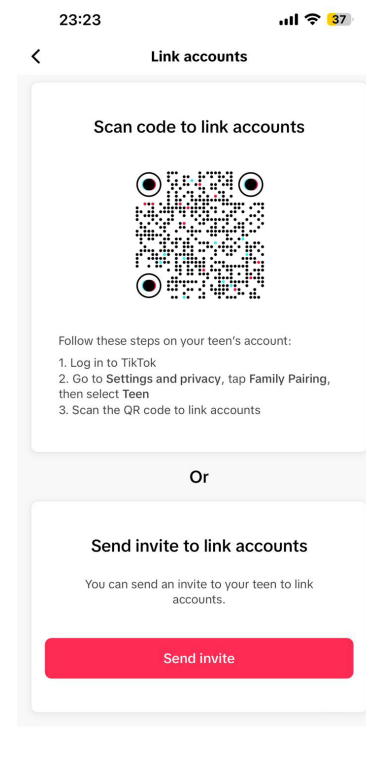Photo by: Besjan Bytyci, 2025.

fig. 15 TikTok linking process screen, featuring a QR code and instructions for connecting parent and teen accounts.
Photo by: Besjan Bytyci, 2025.

TIK TOK Feed

Device Usage for Social Media

Desktops

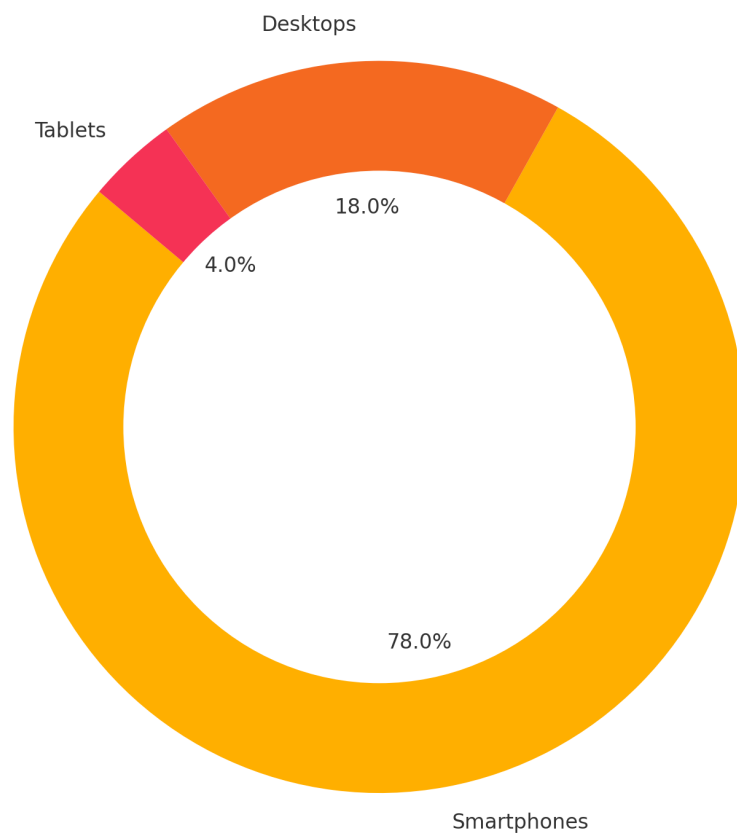Tablets

18.0%

4.0%

78.0%

Smartphones

fig. 16 Device Usage for Social Media
The chart shows the percentage of users accessing social media via smartphones, desktops, or tablets, highlighting the dominance of mobile devices.
Created by: Besjan Bytyci, 2025

TIK TOK Feed

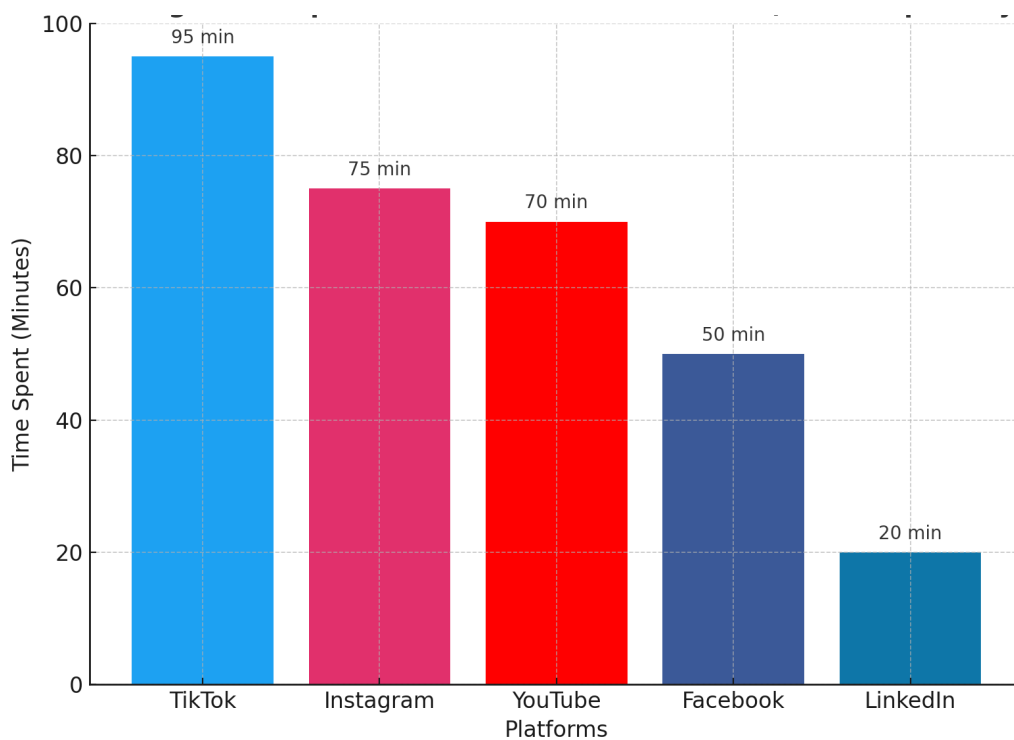## Average Daily Time Spent on Social Media Platforms

fig. 17 Average Daily Time Spent on Social Media Platforms
A diagram comparing the average daily time spent by users on various social media platforms.
Created by: Besjan Bytyci, 2025

BESJAN BYTYCI

TIK TOK Feed

Most Used Social Media Platforms Worldwide

WeChat

TikTok

Instagram

Others

5.4%

5.0%

15.1%

2.4%

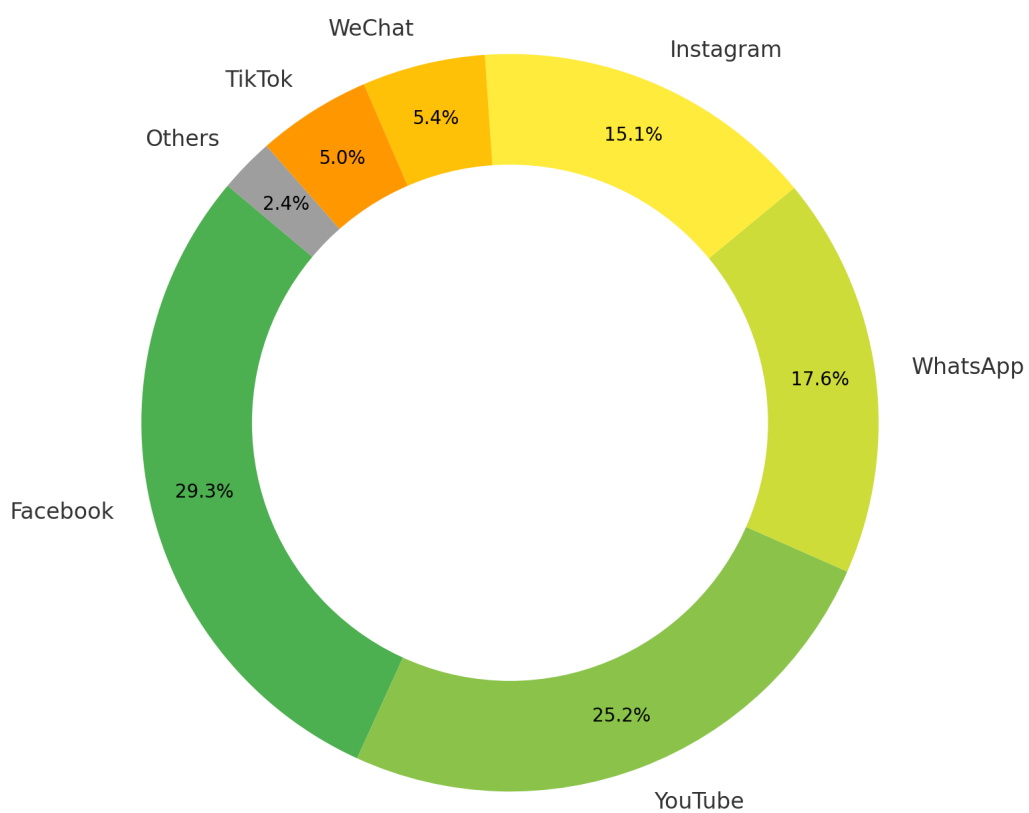WhatsApp

17.6%

Facebook

29.3%

YouTube

25.2%

fig. 18 Social Media Usage Distribution
A donut chart illustrating the percentage distribution of the most used social
media platforms worldwide,
created by Besjan Bytyci, 2025

TIK TOK Feed

References:

1.Boltanski, L., & Chiapello, É. (2005, 2018). The New Spirit of Capitalism. London: Verso.
2.Srnicek, N. (2017). Platform Capitalism. Cambridge: Polity Press.
3.Sadowski, J. (2020). Too Smart: How Digital Capitalism is Extracting Data, Controlling Our Lives, and Taking Over the World. Cambridge, MA: MIT Press.
4.Zuboff, S. (2019). The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. London: Profile Books.
5.Foucault, M. (2008). The Birth of Biopolitics: Lectures at the College de France 1978-1979. Basingstoke: Palgrave Macmillan.
6.Rosler, M. (2013). Culture Class. Berlin: Sternberg Press.
7.Guattari, F. (2007 [1989]). The Three Ecologies. London: Continuum.
8.Mörtenböck, P., & Mooshammer, H. (2021). Platform Urbanism and Its Discontents. Rotterdam: nai010 publishers.
9.Sholette, G. (2010). Dark Matter: Art and Politics in the Age of Enterprise Culture. London: Pluto Press.
10.Bishop, C. (2012). Artificial Hells: Participatory Art and the Politics of Spectatorship. London: Verso.