Thomas Schmidt-Lux[1]

Silicon Headquarters
The Architectural Faces of Digital Capitalism

ABSTRACT

Although digitalization processes are frequently described as being immaterial and 'virtual', the importance of material space and architecture in the Silicon Valley is evident. Just recently new headquarters of Apple, Facebook and Google have opened. Based on walk-throughs, interviews, documents and photography, the essay analyses their architecture and spatial organization. The analysis reveals that there is no single, uniform form of contemporary corporate architecture in Silicon Valley, just as there is no coherent picture of the digital. Google builds accessible and permeable, Facebook creates a built community, while Apple builds its very own world, similarly hiding and exposing it. Thus, the analysis of architecture reveals different conceptions of an often monolithically described field.

Keywords: architecture, space, headquarters, Silicon Valley, materiality, digitalisation

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The Architectural Faces of Digital Capitalism

1. Introduction

At the beginning of this article stood an observation that surprised me. Within a comparatively short period of time, between 2017 and 2019, three of the largest tech companies in Silicon Valley – Facebook, Google and Apple – had opened new headquarters or were in the process of constructing one. I found this accumulation remarkable. Although Silicon Valley and its players had been on the upswing for years and were productive in many ways, their activities were mostly related to their products. All of a sudden their headquarters were making headlines.

Of course, it may not be new for companies to construct buildings to present themselves to employees and the outside world. The construction of innovative, outstanding or prominently located headquarters or other company buildings can be traced back to the beginning of the 20th century and is associated with corporations such as Krupp, AEG or Olivetti (Messedat 2005). However, the headquarters in the Silicon Valley seemed special to me. First, the amount of money and aesthetic effort that has gone into these buildings is remarkable at a time when modern office architecture is shaped by other rationalities: "[D]ivisible layout and lack of cohesive identity have become valuable characteristics for a real estate market focused on flexibility and short-term returns and, therefore, dominated by tenant fit-out demand" (Buck 2010: 9). Second, although one likes to think of digitalization processes as immaterial and work processes as supposedly becoming more and more 'virtual' (see Prinz 2012: 249f.), architecture plays an important and increasingly important role. Silicon Valley is not only the place and origin of supposedly immaterial ideas or ideological programs (cf. as different positions Gumbrecht 2018 and Nachtwey/Seidl 2017), but also a place where digitalization processes are materially effective and perceptible.

This led to the idea of thinking about the headquarters not as just another example for contemporary corporate architecture. The studies that refer to this concept also examine the architecture of companies, their formal language and their design (see Vonseelen 2012). However, the focus is usually on the analysis of the explicit claim of companies to use architecture as a means of corporate communication. Accordingly, corporate architecture usually aims for similar, identifiable and exceptional buildings. And, of course, the headquarters are thought to represent their companies too. Through their architectural form the companies take shape, both for customers and employees. But the analysis intended with this article aims further. I argue that the contemporary headquarters architecture addresses the concept of "the digital" in general. An analysis of the buildings of three of the most important firms of digital capitalism can, I believe, help to understand basic principles and structures of the digital transformation.

The analysis reveals, however, that there is no single, uniform form of contemporary corporate architecture in Silicon Valley, just as there is no coherent picture of the digital. In sociological terms, the article is therefore also a plea against a diagnosis of "digital capitalism" in general and an undifferentiated inventory of what constitutes "the digital", digital work and the social transformation assumed in the course of digitalisation processes. While there is an extensive amount of literature focusing on an analysis of the architectural design

of headquarters (Goldberger 2011; Levy 2017; Borries 2017), the architectural firms that were involved and star architecture in general (Jencks 2006; Alaily-Mattar/Ponzini/Thierstein 2020), and, more broadly, the role of architecture as part of a capitalist system (Sklair/Gherardi 2012), sociological implications of new headquarters have been little discussed to date.

The article is structured around three themes: First, a discussion of the way sociology can contribute to the analysis of architecture. Rather than specifying the constructive and stylistic details of the buildings (as approaches rooted in the disciplines of art or architectural history would), the analysis is oriented towards sociological implications of the architecture. Methodically, I am thereby asking about the *documentary meaning* of buildings. Rather than focusing on the intentions of the architects, this entails asking about the "action orientations and habitus forms" (Przyborski/Wohlrab-Sahr 2008: 281), documenting in a building.

The second part of the article focuses on corporate architecture in Silicon Valley, which serves as the main case study for the analysis. The section includes a brief summary of the general context of Silicon Valley, as well as an analysis of the new headquarters of Google, Facebook and Apple from the perspective of a visitor of the buildings and, hence, those aspects that are relevant to the perception of the architecture from a sociological point of view.

The empirical section analyses, thirdly, the mentioned headquarters and is structured alongside two concepts that are central in terms of the sociological implications of architecture more generally: (1) the permeability of buildings, that is the openings and closings of architecture; and (2) the aesthetic dimension of the buildings, referring to their shape and design. Analytically, the article examines the specific *assemblage* of the buildings at hand (see Farias/Bender 2010). In contrast to analyses which only consider architecture within its ground plan and seemingly independently of users, furnishing and other elements (and thus also the processes of appropriation of space), this entails an understanding of architecture as constituted by architecture, users and other elements.

The analysis of these assemblages draws on reporting on the company headquarters published over the course of recent years, as well as material acquired during my field work in autumn 2019. During this stay I visited the headquarters of Google, Facebook and Apple and gained access to the interiors of Google and Facebook. The access was conveyed by employees working there, who accompanied me during the tours. During the tours I spoke to the employees and took field notes and pictures.[2] Due to the circumstances the conversations with the interviewees had the character of mainly open and only roughly structured interviews. However, they evolved around their knowledge and their experience of the specific headquarters. The interpretation of the data was conducted according to the principles of the Grounded Theory (Corbin/Strauss 2008).[3]

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2 Getting admission via official channels turned out to be extremely difficult and was unsuccessful in the case of Apple. In my analysis of Apple I am therefore relying on my observations and field notes of my visit to Apple's Wolfe Campus, which is a minor Apple-Campus located nearby Apple Park and which gives a good impression of Apple's general ideas on campus organization and the interior design.

2. SOCIOLOGY OF ARCHITECTURE

As a material artefact I understand architecture as a potentially influential and relevant part of the social sphere (Karstein/Schmidt-Lux 2017). Materials in general and artefacts such as buildings in particular are not just the meaningless setting of interpersonal interactions. Architecture and things – like natural factors – are part of the social sphere beyond human attributions of meaning and significance (Delitz 2009; Colomina 2018).

The specific role of architecture, however, is controversially discussed. Some authors stress the 'active' impact of the material sphere and the social effects of architecture (Popitz 1992). Other research locates the role of architecture in social practices, which are conceptualized as an interplay of human actors and built materiality (Schatzki 2010). Pierre Bourdieu (1993) and Paul Jones (2006) have drawn attention to the symbolic relevance of architecture. In Jones' work, however, this relevance is identified above all in the discourses on architecture, in which the architectural expression of a building is fixed.

While acknowledging the strengths and fruitful insights of these perspectives, I suggest a different approach. It follows the assumption that architecture has its own structure of meaning that does not equal processes of attribution. These structures of meaning are specific inasmuch as it was not the building that decided what form, shape and thus expression it aspired to have. At the same time, however, a building is not solely the result of the ideas of an architect or a viewer. By means of its structural and material form it rather performs a largely stable meaningful structure which can be interpreted.

In doing so, I hereby invoke the distinction made by Karl Mannheim (1980). He assumed that all "cultural entities" - all "objectivations" of the social - have a double meaning. One is the *immanent meaning*, which is expressed in communicative actions, for example. These can be, for example, the concretely expressed intentions of a person who connects specific and articulated goals with his or her actions. A distinction should be made between this and the *documentary meaning*, which is more hidden. With this dimension, Mannheim meant to capture the implicit assumptions – the immanent meanings – that are expressed. The idea is that a specific way of thinking and acting refers to something, or documents something more fundamental. This fundamental principle can refer to the habitus of a specific class or the world view of a generation, in any case something which transcends the individual case. Applied to architecture, this suggests asking about the documentary meaning of buildings. If the concrete structural form of the headquarters is up for discussion, this aims to question the principle that is evident in the building; it is aimed at "action orientations and habitus forms" (Przyborski/Wohlrab-Sahr 2008: 281), which document the building.

As with Mannheim and the documentary method, however, attribution is not easy. Even if we agree on the assumption that specific ideas, programmes and identities are inscribed in architecture as part of the objectivations of the world (Steets 2015), it remains a primarily empirical question of what a specific building stands for. To decipher this meaning or to attribute it to a particular social entity is the task of analysis- thus also suitable for methods of interpretation based on Mannheim and his analyses of works of art.

Empirically, the interpretation of the headquarters focusses on two aspects. First, I am interested in the demarcations between an inside and an outside made by the headquarters. Architecture always includes certain individuals and groups that are able to enter and excludes others; it rejects or invites and constitutes a group that belongs and a group that does not. Analytically, I am interested in these processes of inclusion and exclusion manifested in the architecture. Second, I am asking about the specific aesthetic features of the headquarters. What are the shape, form and design of the buildings? And how do these aesthetic features possibly allude to specific word-views and interpretations of the digital sphere?

Finally, I am not confining the analysis merely to the architecture itself. Instead I assume that the documentary meaning of the headquarters can be found in the assemblage of the architecture, artefacts and

users (on the concept of assemblage, see Deleuze/Guattari 2008 and Farias/Bender 2010). As we will see in the empirical parts of the article, the headquarters would only be partially understood if we did not include its material surroundings, its facilities, its users and its visitors. The interaction of all these elements results in a specific assemblage with its own documentary meaning.

3. Architecture and Buildings in Silicon Valley

In order to trace the documentary meaning of built digital capitalism, I selected the three headquarters of Apple, Facebook and Google for analysis. Along with Microsoft and Amazon, these three companies are among the Big 5 of contemporary tech-capitalism, and all three buildings are located in Silicon Valley, probably the most innovative region in the digital sphere in recent decades. All three headquarters buildings are also comparable in that they mark the transition from rented office space to the corporation's own and specially designed buildings. On the basis of the history of their building, one can therefore easily follow the development and, in this case, the rapid career of the companies; a career that also takes place in the medium of architecture. Put simply, there were garage projects in the beginning, followed by rented, yet simple premises, increasingly replaced by spectacular star architecture.

It is also noteworthy that all three buildings are located in the Valley and not in San Francisco itself, as one might assume (and where they might have been built in the 1970s). Google, Facebook and Apple are still primarily located in the Bay Area, and this is again for space-related reasons: You can find all the three headquarters within a 15-mile radius of Stanford. Stanford University is a kind of intellectual core of Silicon Valley and the starting point for many start-ups, which then, interestingly enough, continued to seek spatial proximity to Stanford. A historical prime example of this is William Hewlett and David Packard, who studied at Stanford in the 1930s and then founded their company from a garage (!) in Palo Alto. Google's founders Larry Page and Sergey Brin also studied at Stanford. So, Stanford can be seen as a gravitational centre of Silicon Valley, still attracting even the most successful companies and their founders. But the architecture of Stanford University is also important: Steve Jobs always had the Stanford Quad in mind, Stanford's park-like main square, when he planned the landscape architecture of Apple Park (Rybczynski 2018).

However, the architecture of the new headquarters of Apple, Facebook and Google has to be examined against the background of the general construction activities in Silicon Valley. Only then does it becomes clear what significance and what dimensions these activities have now reached, and how far the new headquarters buildings are in line with more comprehensive processes in Silicon Valley.

The main driver of the construction processes in the Bay Area is a myriad of companies and company buildings that have settled and are still settling in Silicon Valley. Basically, we are dealing with a continuously growing area between San Francisco and San Jose, which now occupies an incredible amount of office space and which continues to expand. What originally led to the positive development of a prosperous region has meanwhile caused massive problems: Office and housing rents and property prices are becoming significantly more expensive. This is difficult for the municipalities, which have hardly any leeway left to realize their own building projects. Above all, however, it has led to a noticeable increase in the cost of housing and living in the Valley. The square meter price for real estate in Palo Alto is now around 15,000 US dollars[4] and has thus doubled within the last five years. The monthly rent for a four-room apartment averages between 5,000 and 6,000 dollars.[5] In Menlo Park and Mountain Views the prices are only slightly lower. While this may not be a problem for the high earners in the tech companies with an average income of $12,000 per month per household in Palo Alto (compared to less than $5,000 in the US as a whole), the average monthly income per household in

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4 https://www.zillow.com/palo-alto-ca/home-values/

5 https://de.numbeo.com/immobilienpreise/stadt/Palo-Alto

the neighbouring county of San Jose/Sunnyvale/Santa Clara is already significantly lower with an average of $8,750. Life in Palo Alto is, hence, not affordable anymore.

Of course, Google, Apple and Facebook are an important factor behind these developments. Google alone has nearly 400,000 square meters of space in Mountain View, and Facebook owns a similar stretch of land. Its new building is just the latest addition; a lot of space had already been rented previously, a lot more space is currently under construction and there are plans to take over further parts of Menlo Park. The latest plan is the 24-hectare Willow Village Project; a new district in its own right, which will house apartments, apartment buildings, a hotel, a park and, last but not least, Facebook offices.[6]

The enormous inflation also has far-reaching consequences for the tech companies themselves. On the one hand, they need new office space to keep growing. At the same time, the lack of available land for developments makes obtaining construction plots difficult. Building upwards is not possible because of height restrictions and zoning laws, so that they have to cultivate more land, which is either very expensive by their standards, or the local authorities no longer want to give it up. This leads to donations like the recent one from Facebook, which transferred 25 million dollars to Santa Clara County to build affordable housing for teachers.[7] This has to be seen in the context of expansion requests from Facebook itself, which still wants to expand its office space in Menlo Park and above all to build the Willow Village mentioned above.

Also, not all of the tens of thousands of employees at Apple, Facebook and Google are top earners. As a whole infrastructure of utilities has been established around the companies – not to mention the facilities that already existed previously– for the people employed in these facilities, but also for many people employed by the tech companies themselves, the current situation means either very high living costs or massively long journeys to and from the facilities. Both Google and Facebook therefore offer shuttle buses to and from their company buildings. However, these can only provide for some of the employees; most of them still come individually by car.

4. The Headquarters

In the following, the headquarters of Google, Facebook and Apple are analysed with regard to the aspects discussed. The analysis aims at revealing the documentary meaning of the headquarters, the 'hidden' messages of the buildings and thus their interpretations of the digital sphere. After a short introduction to the history of the buildings, the interpretation focusses on two aspects. First, it asks about the openings and closings of the buildings, the separation of inside and outside made by the architecture: How permeable are the buildings? Who gets into them and how? What is inside the buildings, what is outside? Second, I am interested in the shape and design of the buildings: How does it look like? By what means? Both dimensions are concerned not only with the building itself, but in the assemblages with artefacts and users too.

Of course, the two dimensions cannot always be neatly separated. But the questions of (in)accessibility and of the specific language of form promise to cover two important dimensions of the building, which become particularly important in a sociological analysis. I will also interweave the analyses with observation notes in order to mark my own perspective even more strongly.

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6 https://www.menlopark.org/1251/Willow-Village

7 https://www.mercurynews.com/2019/10/17/facebook-donates-25-million-to-build-bay-area-teacher-housing/

4.1 Promoting trust. The Google Campus

General Remarks

When we talk about Google's headquarters, we are actually talking about two buildings, both located in the northern part of Mountain View, not far from the bay. One part, referred to as Googleplex, forms the core of an entire area of buildings. Essentially, there are four sub-buildings arranged in the form of a kind of open campus. Even though these buildings were not constructed specifically by or for Google, but initially taken over by Silicon Graphics, a former computer manufacturer, the interior has undergone major renovations so that it seems adequate to consider them as Google buildings. Built in 1997 and rented by Google in 2003, the company purchased the complex in 2006. Currently a new company headquarters (designed by the star architects Bjarke Ingels and Thomas Heatherwick) is being built in the immediate vicinity. Although it is still under construction and will be inaugurated in 2020, I was able to take a closer look at it and thus examine some of the principles of its architecture.

Openings – Closings

Googleplex is the most inviting complex of the three buildings analysed for this article. The overall constellation can be described as a corporate architecture that considers itself as part of the public space. The buildings are arranged rather loosely, connected by streets and foot- and bicycle paths. Basically, the Google buildings organically connect to the residential areas of Mountain View. There is no border or crossing. Particularly when approaching the area and Googleplex from the south, the visitor will notice that the office buildings in the heavily tree- and lawn-lined area are more and more part of Google.[8] While approaching the area for the first time, I was puzzled:

The whole thing appears unstructured and is difficult to understand at first sight. I have to do several laps with the bicycle to slowly get an overview. Maps for orientations appear on site from time to time, but at the information desk or in the lobby of a building I am not given a map (there seems to be one for internal use, which is apparently not handed over to guests, the woman at the desk hesitates for a moment)

However, after adjusting to the spatial organisation of Googleplex, I felt invited. Numerous information stands on campus address people with the inscription "Ask me a ?". The Google logo, attached to building 43, is apparently a prominent place to take selfies. There is also a merchandise shop, even though not very centrally located in a rather unrepresentative building at the edge of the area. Nowhere is access to the area regulated or blocked. An employee card is only needed to enter the buildings themselves and the entrance has only recently become guarded.[9]

The complex gains even more openness and permeability due to the numerous Google bicycles standing around. Although these are actually intended for the employees to cover the sometimes lengthy distances between the buildings in Menlo Park, they are obviously also used by tourists. Actually, it is not easy to tell whether a tourist or a Google employee is riding them. Employees usually don't have their bags with them and are, hence, not identifiable by badges or other signs as employees, and the tourists can be recognized by the often unsafe handling of the bikes (after some practice). I used one of them to explore the whole area in Menlo Park, too. You just put the bike down after use, there is no control here either; strictly speaking you could also go home with the bike.

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8 Richard Sennett describes the New York's Googleplex as being an island within the city, not belonging to it (Sennett 2018). I am not sure if this is an appropriate analysis of the New York case; for the Mountain View Googleplex it surely does not apply.

9 This has been the case since 2018, when a woman gained access to the Californian headquarters of Youtube and fired at the employees.

10:00 a.m. A new infrastructure begins to take shape on campus: there are a lot of food trucks with different culinary directions, but also a truck to cut hair. As I learn later, the trucks are all managed by Google, even though it looks as if they would be operated individually.

The overall very open atmosphere is further enhanced by other actors and material artefacts. Especially at lunchtime, the food trucks become focal points for the employees, then heavily frequenting the campus.

The far-reaching openness or rather general lack of clearly recognisable boundaries between the inside and outside is also taken up in the new headquarters designed by Bjarke Ingels. The headquarters has the form of a large, tent-like building with a semi-transparent, curved roof, reminiscent of the Sony Center in Berlin. It is supposed to house numerous offices, while the ground floor will be open to the public, thus forming a counterpart to the open campus structure of Googleplex. As interlocutors told me, Ingels specifically emphasized this openness to the surroundings of the Google headquarters as an important basic idea of the design when presenting the construction plans.

Google presents itself here in both buildings as an open, accessible company, as a player that does not shy away from its potential customers. While Google does not disclose sensitive information about itself on campus as the actual work areas are screened off and remain inaccessible, the open structure of the campus and easy access suggest a communicative offer and invitation to the corporate cosmos – and not least its products.

Aesthetics

Considering the aesthetics, formal language and thus the symbolic expression of the Google buildings, it becomes clear that both Googleplex and the new Ingles-building are buildings that emphasize creativity and playfulness. Strong colour designs and accentuations are striking both inside and outside (this is a clear feature, especially in contrast to Apple). There is also a relatively heterogeneous style in terms of both interior and exterior design. As a result, different areas are created both inside and outside offering playful environments that invite employees to rest, but which can also be used for work meetings.

The interior of Googleplex in particular has undergone many changes since the takeover of the buildings. This concerned, for example, the ceilings, all of which were opened up to increase the height of the rooms, while at the same time emphasizing a less office-like character of the space. Some elements, especially doors, have been preserved to remind us of the previous history of the building. In return, many areas were also re-coded symbolically. The café inside the Googleplex is named "Yoshka" after the dog of an early Google co-founder, and at the entrance to the café the slogan "Community, Comradery, Friendship" is written. In other parts of the building there are doctors and wellness facilities, a stream pool for swimming, plus micro-kitchens where food and drinks are available free of charge.

The outdoor area is likewise a mixture of different functional areas, with an emphasis on recreational use. The beach volleyball field is a very conspicuous, but also a spacious meadow area with chairs and deckchairs. One of the special artefacts, which are often made known through photos, is the replica skeleton of a Tyrannosaurus Rex on the campus. There are many stories surrounding this skeleton. While in one version the dinosaur was already purchased by Silicon Graphics, others claim that Google had it put up as a reminder to their own company never to become obsolete and extinct. Jakobsson and Stiernstedt point out that both the T-Rex and the replica model of the Space Ship One are "readymades": „They are objects lifted out of specific contexts (places, times) and put together in Googleplex. This fact underlines the tendency of Googleplex to express the difference between Google and other media companies" (Jakobsson/Stiernstedt 2010). In any case, the dinosaur today also serves as an invitation to visitors to have their picture taken on the Google site and to circulate these motifs further.

Googleplex, Main Campus

Googleplex, Main Campus

Googleplex, Main Campus

Googleplex, Main Campus

Googleplex, Main Campus

*New Google Headquarter, Charleston East,
under construction*

I wrote at the sight of Apple's Wolfe-Campus that it could also be a university. In retrospect this seems nonsense to me. Here at Google it is much more like an educational institution, it gives me a less formal impression, the people appear much more diverse and casual. In comparison, Apple felt more like a bank.

As this note also shows: The interplay of architecture, artefacts and users results in a specific assemblage with its own documentary meaning (Farias/Bender 2010). In the case of Googleplex, this assemblage promises a hedonistic way of working and living. Work and leisure are closely intertwined, and both spheres also follow similar logics. Both the office and leisure areas are similar in design; working has a playful aspect, the playful areas are at the same time close to the workplace and on the company premises (cf. Turner 2008 on such connections).

Through the player Google, digital capitalism presents itself here as particularly accessible and tangible: the digital is inviting, it is 'normal', it is like you and like us. The documentary meaning of the complex is far from being mysterious or conspiratorial. Instead the area extensively communicates transparency and accessibility. Transferred to the company's digital products, these can also be trusted, they literally "are not evil "[10] and can and should be used without concern.

4.2 For members only. The Facebook Campus

General Remarks

Facebook's new headquarters are located in Menlo Park close to the Bay. Here too, we are dealing with an assemblage of previously existing and newly built architectures. From 2004 to 2011, Facebook was still located in Palo Alto, but then moved into a complex of existing office buildings that had previously been used by Sun Microsystems. Symbolically, the new area was taken over by renaming the main street surrounding the complex to "Hacker Way".

A new building complex has now been added, consisting mainly of the buildings MPK-20 (opened in 2015) and MPK-21 (opened in 2018). This body of several hundred meters in length forms the actual headquarters of Facebook. With Frank Gehry as its designer, a star architect was involved. Its valorisation is further enhanced by the "LEED Platinum Certification", awarded by the US Green Building Council for complying with the latest environmental standards.

Openings – Closings

Whereas the boundaries of the property are rather indefinite in the case of Google, the line is drawn more clearly at Facebook and its headquarters. In comparison, Facebook occupies a position between the two poles of openness (Google) and closure (Apple). While MPK-20 and MPK-21 do not completely seal themselves off from the public, they do draw clearer boundaries than Google in terms of proximity and accessibility.

On the one hand, and this is always communicated in the official Facebook statements, the building is supposed to serve as a continuation of the settlement structures of Menlo Park and thus be perceived as a 'normal', open district. In fact, the Facebook area is closely connected to the residential development of Menlo Park. Willow Road, which comes from the south, runs through the residential area to Hacker Way, with a Starbucks and a Jack in the Box, a common US-American fast-food restaurant chain, just before the end.

However, the accessibility of the site is much more limited than in the case of Google. One reason is an old railway line which is about 50 meters wide and goes between the two headquarters and the rest of Menlo Park. It is fenced on both sides and thus clearly separates the two areas. As a result, there are only a few ways to access the Facebook building from Menlo Park. The construction of bridges connecting them has been announced, but there is still nothing to be seen.

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10 "Don't be Evil" was part of Google's Code of Conduct until 2018. Since then it is "Do the right thing."

Once you have crossed or bypassed this railway line, you will be able to get near the buildings unhindered. Access into the buildings, however, is not possible, just as there are no invitations to stay or to stroll as in the case of Google. Unlike there, the atmosphere is hardly inviting. There are no information stands, no public merchandise shop, no other indications. While the buildings can be accessed on the ground level, the only things to see here are parking lots. The building does not reveal anything of its interior to the outside. It allows approach, but closes itself to the outside. In a way, it plays a game of transparency and accessibility on the one hand, and invisibility and aloofness on the other.[11]

The same applies to the old Sun Microsystems campus now occupied by Facebook. Here, one also gets to the buildings, but they are spaciously lined with parking lots. They also form a campus-like interior space - like Google's - but inaccessible to outsiders. The Facebook logo or the sign with the like-thumb is also located further away from the buildings and has more the effect of "You don't have to go any further…" than that of a "Welcome!" sign.

Aesthetics

The peculiar constellation of open access and closed interiors is continued in the design of the headquarters. Basically, the Facebook headquarters communicates internally much more than externally. For visitors or tourists, the building hardly appears spectacular or even attractive. It is neither particularly high, nor does it have a special façade or design language – particularly in comparison to the tent roof of the new Google headquarters or the Apple Spaceship this is striking. Everything looks more like a mixture of a multi-storey car park or the back of a mall. The façade hardly has any windows. In addition, there is no clear main entrance, and there are only a few places where you can look inside, and then to a very limited extent. While access is granted to the ground floor, the actual interior of the building starts on the first floor and can therefore only be guessed at from the outside.

All the more striking is the difference to the interior. It is spacious and openly designed, forming a mixture of open-plan office and mall. One can cross the entire complex of MPK-20 and MPK-21 on a wide corridor that winds its way through the building. One passes office areas that open up again and again, meeting rooms of different sizes but always visible through glass. The whole building contains not a single closed or non-transparent room. In addition, there are kitchen corners and smaller retreats, sometimes also living room-like zones with bookcases and sofas. The building features a large cafeteria and medical facilities. Everything is very colourful and very varied in terms of its design.

Obviously, and this becomes clear quickly after entering the headquarters, the building is targeted towards a strong communication inwards with a strong purpose to create a pleasant working environment. This includes the roof garden, which extends over both building complexes and has a size of 15,000 sqm. Countless plants and shrubs as well as real trees, some of which are 15 metres high, are planted here. Everything is laid out like a park, with paths for walking and numerous corners to sit, linger and work.

These architectural and design efforts are accompanied by other explicit and implicit references to its specificity:

The buildings have relatively different interior designs, often colourful, and there is always art hanging on the walls. The posters often feature motivational quotes, for instance in the lobby of the building: "Be the Hero", "Be brave", "Focus on Impact", or "Pride connects us" and numerous other variations. "Nothing at Facebook is somebody else's problem" is the only slogan where the company name explicitly crops up. The rest could also hang in any other company.

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11 This corresponds to other diagnoses of Facebook's corporate policy (vgl. van Dijck 2013: 59ff.).

Facebook Building MPK 20/21, Menlo Park

Facebook Building MPK 20/21, Menlo Park

Facebook Building MPK 20/21, Menlo Park

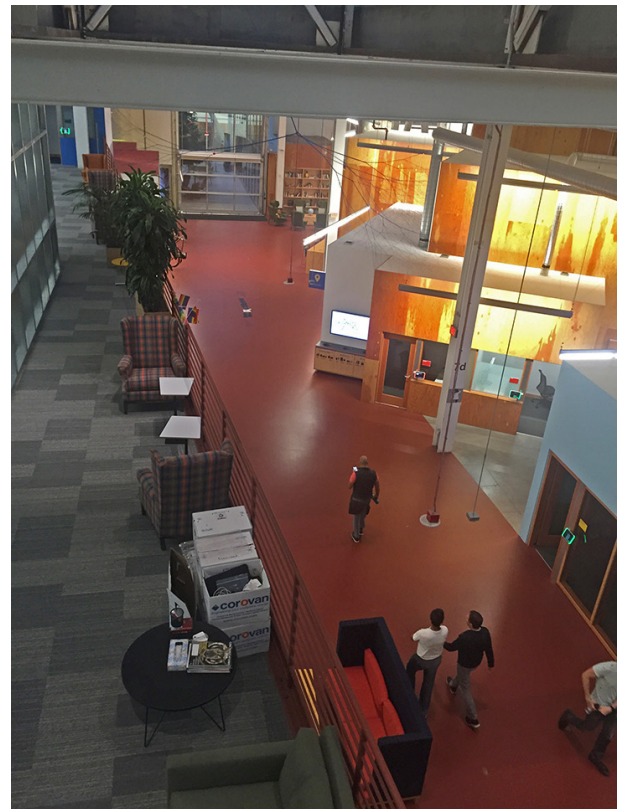Facebook Building MPK 20/21, Posters on Inside Wall

Facebook Building MPK 20/21, Rooftop Garden

Facebook Building MPK 20/21, Rooftop Garden

Facebook Building MPK 20/21, Inside Pathway

Facebook Building MPK 20/21, Inside Pathway

The posters are produced in an in-house screen-printing workshop, which is open to all employees. The offer does also a bicycle and wood workshop, where you can, for example, make your own furniture. At one point in the building I discovered a kind of rolling gate. When I asked about it, I found out that this was a garage door, which was functionally useless at this point, but was intended to remind employees of the origins of Facebook in simpler buildings.

The posters must be seen in an interplay with the workshops, the garage door, the roof garden and its expensive furniture. All together they form the program of a community architecture. The building communicates primarily to the Facebook employees, it shows them what and how they want to work and be together and last but not least how the products they create together should be (also cf. Borries 2017: 213).

Fred Turner has described this in a similar way, especially with regard to the posters and murals in the 'old' campus buildings. Turner describes them as the "aesthetic infrastructure" and "management tools" that are supposed to promote and legitimize the new "surveillance capitalism" (Turner 2018). Rather than Turner, who emphasizes the veiling effects of art, I am primarily concerned with the coherence of different design tools. The full impact of the posters can only be understood by assembling them with the built whole. For then one sees their analogy, which I see less in a veiling than in their affirmative character: just as one discovers its actual qualities after entering the building, one will- so the building promises- only recognize the qualities of the Facebook community after joining the social network.

The building does not simply represent the online-platform Facebook, nor does it make Facebook accessible offline. Rather, the building communicates to the outside world on the condition of an avowed Facebook-membership. Only inside, as an employee, can you see the inside of the building. Only inside, as a member, are you allowed to recognize the qualities of Facebook 'from the inside'. Become a member and you will see more!

The public prestige of the building is not produced on site, but conveyed via information and photos on the net, via architectural journals and via bodies such as the Green Building Council. The artistic value of the building is also decided upon in these "constellation instances" (Bourdieu), and the photos of the roof gardens and the green inner courtyards officially released by Facebook arouse interest in the building; interest that can hardly be satisfied locally, but which only increases the community's incentive.

4.3 Hidden Sacredness. The Apple Campus

General Remarks

Apple's new headquarters is probably the building that has become most famous among the three headquarters under scrutiny. Inaugurated in 2017, it is located in Cupertino, just three kilometres from the company's original headquarters. Apple purchased a number of properties at this new location, including an area previously used by Hewlett Packard.[12] The headquarters is a monumental circular building, four storeys high, glazed all around and structured horizontally by lamellas. It spans a perimeter of 1.5 kilometres and can accommodate up to 12,000 people. Yet another star architect, Sir Norman Foster, is responsible for the design. The building also gained a LEED Platinum certification and is equipped with technology that makes it particularly earthquake-resistant.[13] The construction costs were rumoured to be 5 billion dollars. Around the circle there are several other small buildings, including an auditorium, the so-called Steve Jobs Theatre, where product presentations of Apple's products are held.

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12 Here again, corporate careers can be traced very well on the basis of their spatial dimension.

13 https://www.nytimes.com/2019/06/04/us/apple-headquarters-earthquake-preparedness.html

Openings – Closings

In the case of the headquarters of Apple, we are dealing with a set of very rigorous physical boundaries. As a visitor, you cannot directly approach the headquarters or any of the neighbouring buildings. The entire site is surrounded by a fence, behind which an earth wall has been built, planted with trees and shrubs. Thus, by approaching the building, one never sees more than the roof or the upper floor, sometimes even less. The metaphor of the spaceship, which Jobs jokingly brought into play in an early presentation, is given tangible plausibility here.

I get off the bus and approach the building from the south. The first sight actually makes me shiver: Like a landed spaceship or a huge flying object (I can't think of any better analogies) the building is hidden behind the wall, almost lurking, only the upper floors are visible to a limited extent. Above all, you can see how huge it is, while it seems impossible to tell where the building ends.[14]

The design of Apple Park and the entire site is very different from its surroundings: Instead of forming a grid, it makes generous and non-compacted use of the entire area. Especially against the background of the schematic and densely built Silicon Valley, in which streets run at right angles to each other, the property sends a clear signal of distinction. Both the wall and the layout indicate a very sharp contrast of Apple Park from its environment.

This strict boundary between the inside and the outside is at the same time made permeable, but in a very specific way. Right next to Apple a visitors' centre, featuring a café and a Mac store, is open all day. Here, the secrets of the headquarters are somewhat unveiled. A third room in the visitors' centre contains a minia-ture version of the area of Apple Park. Approaching the model, which is about four square meters in size, I was handed over an iPad that allowed me a virtual view of the site, its buildings and, last but not least, Apple Park itself. The representation is very detailed and works smoothly.

Briefly raising my eyes, however, I became aware again how odd this situation is. Mediated by an iPad and a virtual reality model – I was looking at a building that is located in the immediate vicinity! Apple with-draws its headquarters from direct visual or even haptic access from the outside, only to make it accessible again in a very dosed and controlled way. This disclosure of information and view is technically mediated and hence more closely monitored. In the case of Apple Park, we are dealing with a very specific proportion of opening and closing. The headquarters is concealed, as well as exposed, in a very controlled and only partial way. In a Durkheimian sense, this makes Apple a downright sacred building: It is not accessible to everyone, not even visually, and therefore subject to a whole series of restrictions and prohibitions (Durkheim 2008).

Aesthetics

This specific constellation is reproduced in the design of the building and the area where it is located. Apple Park, the ring-shaped building, advertised as a perfect circle," lies at the centre of the location. The building presents itself as something out of the ordinary, through its dimensions, its form, its strict yet sim-ple design. The circular shape of the building is connected to the address of the former Apple headquarters ("Infinite Loop"), a (not quite) circular street that surrounded the campus there. In addition, the circular form creates a special compactness of the building. It forms the clear centre of the entire area and at the same time a landscape in itself.

Within the building the circular development opens up a gigantic park of 12 hectares. Steve Jobs himself commissioned the American landscape architect Laurie Olin, one of the leading players in this field, to design the park, Here, Stanford comes in again: In talks with Laurie Olin, Jobs referred several times to Frederick Olm-

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14 Already early on the size of the building excited the minds of the observers (see Goldberger 2011).

sted, a founder of American landscape architecture in the 19th century, who designed the campus of Stanford University (Rybczynski 2018). The design and structure of Apple Park- with paths, more than 8,000 trees, two cafés, a huge meadow and a lake- are organic on the one hand, but leave few options on the other. The path system leaves you free to create your own routes, but at the same time doesn't offer too many variations. So, visitors can be reminded of a trip through a national park, and not only because Apple likes to name its operating systems after such national parks. On the one hand, the Apple Park is full of nature; on the other, it is a thoroughly designed area that strongly shapes its use – nowhere else does the talk of *second nature* seem more suitable.

Other elements contribute to the sacralization of the whole. Above all, it is always pointed out how much the building is based on the ideas of Steve Jobs. Jobs was already the outstanding figure at Apple during his lifetime, and this veneration has rather increased since his early death (Pogačnik/Črnič 2014). Basically, Apple Park is inseparably interwoven with him and thus given a special consecration. Not only was Apple Park created on his initiative. From the very beginning, as Norman Foster has reported in interviews, Jobs was involved in every decision of the design. Both the basic circular shape, as well as seemingly minor design decisions regarding the interior of the building to the plants in the park, were seemingly Jobs' ideas. He insisted on the redwood trees from California, fruit trees he knew from his childhood, additionally a „wellness center complete with a two-storey yoga room covered in stone, from just the right quarry in Kansas, that's been carefully distressed, like a pair of jeans, to make it look like the stone at Jobs' favourite hotel in Yosemite" (Levy 2017). Thus building and person merge; both profit from each other.

Another building on the area, apart from the circle, is the Steve Jobs Theatre. For the most part underground, it hosts the presentations of new Apple products. North of the Circle is a sports facility for tennis and basketball. The fact that neither of these facilities are integrated into the main building once again underlines its sacred position. In the case of the theatre, security issues are probably added here, but the sports facility would have been quite conceivable inside the circle. Its separation can be interpreted to mean that, on the one hand, sport is considered to be important as a practice, but at the same time, should not pollute the sacred space insider the circle.

Next to the sports facility there is another special feature: Glendenning Barn, an old farm that was previously on the site, but had to be moved during the construction work. This building repeats the way Apple has been dealing with the main building. There is a sign outside the house that points to the farm, but the farm itself cannot be seen from the outside. Here, too, a mediated representation and presentation takes place. The actual buildings are only accessible via signs, models, in the case of Apple Park not least via articles in architecture magazines, blogs or private drone videos. Apple uses these channels to ensure that reports and communication about the headquarters and its elements take place, but also secures exclusive access for itself.

All in all, it is clear that Apple Park is once again clearly different from the headquarters of Google and Facebook. Admittedly, those two buildings also wanted to be special buildings: particularly beautiful, particularly pleasant, particularly ecological. But the standards were rather 'normal'; both buildings wanted to remain part of this world. Apple Park narrates a different story: The building and the entire area contrast with its surroundings and usual standards in almost every respect, form a world of its own.

The circularity of Apple Park does also seem very much in line with the unity of Apple software and its products, especially the operating systems. The special design of the building follows the appearance of Apple products. This is clearly evident in the Visitors Centre's Mac store, where the latest models of the iPhone are on display, but where the building itself appears like an Apple product in its purity and design language.

Apple Park, View from Tantau Avenue

Apple Park, View from Tantau Avenue

Apple Park, View from the Visitor's Center

Visitor's Center, Model of the Headquarter

Visitor's Center, Model of the Headquarter

In the café of the Visitors Centre, orders are accepted via iPad, just like the day before on the Wolfe Campus of Apple. My cash then causes problems because a different checkout system is needed. The prices for the coffee are not written down anywhere – the whole thing makes an impression between "everything is free" and the typical café of a Museum for Contemporary Art.

From the very beginning, Apple has been characterized by a simultaneous targeted disclosure or offering of products, which was accompanied by a strong sense of isolation and very controlled openings (Dolata 2015: 521). This ambiguity is also evident in the building and its documentary meaning. The multiple and aestheticized covering that is characteristic for Apple and its very own meaning is basically given a further layer here. While the products are promisingly veiled and presented in their packaging in the emblematic Mac stores, Apple Park seems to function as an extension of this packaging. More clearly than before, we are dealing here with a specific assemblage of building (Apple Park), person (Steve Jobs) and products, all of which are intertwined and form a sacred whole.

An explicit invitation to enter, as in the case of Google and – to a lesser extent – of Facebook, is not extended anywhere here. The building is there and yet not there. Its "techno-sacral architecture" (von Borries 2017: 213) is above all a frequently conveyed presence, as with the VR models and iPads in the Visitor Centre. Thus, the constellation documents a specific presentation of the digital. With the inaccessibility of the spaceship, the proverbial "placelessness" of the digital (Flecker/Schönauer 2016) comes into play. Just as one does not know where most of the data centres are located and, hence, where one's own data actually remains, Apple Park only seems to represent the place where all the Apple products come from. The digital remains obscure, it only reveals as much of itself as it wants; in the end it remains inaccessible, unapproachable and incomprehensible.

5. Conclusion

The headquarters of Google, Facebook and Apple are more than functional office spaces. Nobody spends five billion dollars or hires Frank Gehry for no reason. Both the expense and the involvement of star architects clearly indicate that the headquarters of the largest tech-companies do not only or not even primarily serve to accommodate employees, but are means of (self-)representation.[15] Digital capitalism, supposedly fast, fluid and elusive, apparently (still) wants and needs to be spatially fixed at a certain place and materialized in a specific architecture. Google, Facebook and Apple make a spectacular effort to construct new buildings. Evidently, the possibility to work from everywhere has not decreased the companies' appetites for an architecture that represents their companies' values to their employees and the public. While COVID-19 may further accelerate remote work, the possibilities to work from everywhere have already existed before. In spite of this, Google, Facebook and Apple have chosen to heavily invest in headquarters of high economic and cultural capital. Architecture is an increasingly important element of the internal and external presentation.

Once again, architecture turns out to be an important medium of the social (Delitz 2010; Delitz 2017); the digital age has not changed this. One of the reasons for this continued, perhaps even increased importance of architecture may be its prominent visibility, which stands in striking contrast to the (perceived) invisibility of digital work. It is precisely because there are so few "visible" employees (at least in the company headquarters; if you ignore the suppliers from the Global South) that the materiality and images of this materiality become all the more important. The three headquarters under scrutiny could thereby only be the beginning. Google

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15 For an analysis of the relation between star architecture and cities see Alaily-Mattar et al. 2020.

recently announced plans to develop entire city districts.[16] Here, too, it is obviously not a question of digital vs. analogue alternatives, but of alliances and exploitation.

At the same time, and this is also a result of my research, there is not one single, coherent architectural representation of digital work. While literature on digital capitalism has largely suggested rather uniform trends within the digital sphere (cf. for example Dolata 2015: 507), the architectures and related modes of work vary greatly. All three actors operate in the medium of architecture, aestheticizing their companies (see Prinz 2012) in one way or another, but they do so in relatively different ways. Google builds accessible and permeable, Facebook creates a built community, while Apple builds its very own world, similarly hiding and exposing it. Considering that there is not just one conception of "the digital" that manifests itself somewhere materially draws attention to the differences between the companies. The analysed and obviously rather heterogenic architecture reveals different conceptions of an often monolithically described field. Silicon Valley alone is not a uniform place, but is full of differentiations. And if the digital does not take on a unified form here, then where?

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16 Google's company "Sidewalk Labs" is responsible for the latest "Quayside Project", which was to be implemented in Toronto and foresaw the remodeling of an entire district. It was to be redesigned and provided with a digital infrastructure; the Smart City in its purest form, including the use of an enormous amounts of data of its inhabitants. While the project has been put to halt at the moment of the completion of this text as a result of major protests, the next project of built digitality will surely come (https://medium.com/sidewalk-talk/why-were-no-longer-pursuing-the-quayside-project-and-what-s-next-for-sidewalk-labs-9a61de3fee3a)

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