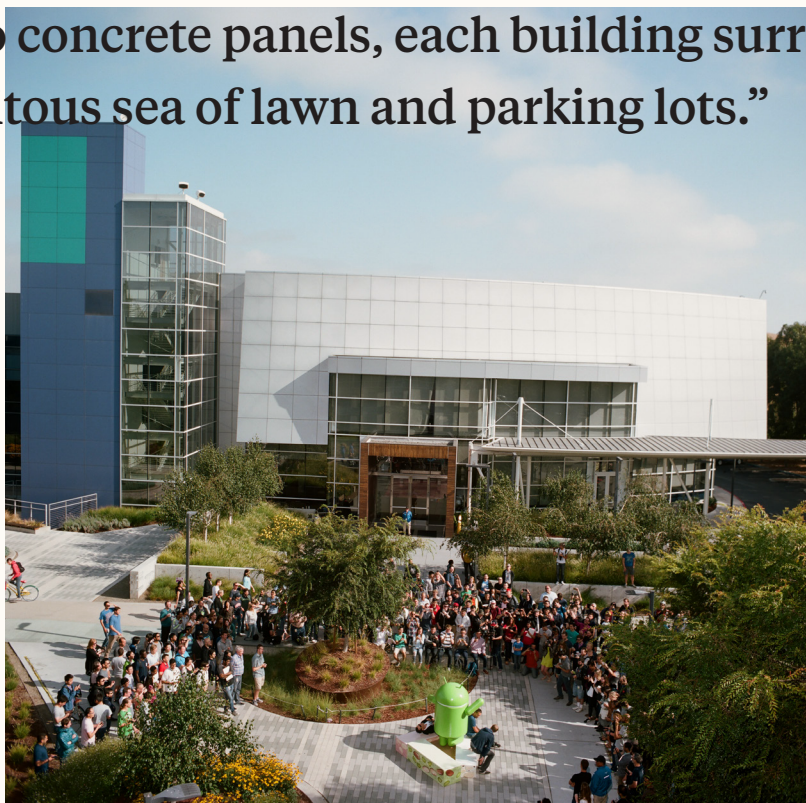


Seeing Through the Walls of Silicon Valley

Words, illustrations and renders Claude Dutson Photographs Ramak Fazel

It's January and while my feet are in London, my head and hands are in California, hovering like a drone above the I-280. This is the Junipero Serra Freeway, one of three arteries that cut through the 30-mile linear sprawl within the Santa Clara Valley, stretching from Santa Theresa in the south up to Redwood City in the northeast, a region described by architecture historian Gwendolyn Wright in the *Journal of Architectural Education* as a “seemingly endless pattern of flat, prosaic surfaces: Spanish-tile roofs, mirrored-glass walls, and cardboard classical colonnades attached to concrete panels, each building surrounded by a ubiquitous sea of lawn and parking lots.”



The photographs accompanying this essay are taken from Ramak Fazel's 2021 visual essay *Silicon Valley No_Code Life*, commissioned by leather brand Tod's and published by Rizzoli. The project saw Fazel document the Valley in ways that avoid the tropes of official images provided by the tech giants, instead focusing on more everyday aspects of life in the region.

My head is tethered by an Oculus Rift (owned by Meta Platforms, Inc. located in Menlo Park) virtual-reality headset to a NUC 11 computer made by Intel (founded in Mountain View, 1968), while an Nvidia (Santa Clara) GeForce graphics processing unit renders Google (Mountain View) Earth VR below my feet and a high dynamic range California sky above me. As the critic Reyner Banham wrote in his 1981 essay ‘Silicon style’ for *The Architectural Review*, “Silicon Valley is not simply a geographical location but a kind of heightened industrial consciousness based on the endless market for[...] gadgetry derived from the silicon chip microprocessor.”

This industrial consciousness is now a globalised state of mind. The phrase Silicon Valley conjures up an idyllic setting for libertarian capitalism under the California sun: Googlers riding primary-coloured bicycles around Sunnyvale, Apple employees ambling through the orchards at Apple Park, MacBook under one arm, a latte in the other. Or a “programmer” on a company-leased bus equipped with Wi-Fi, shuttled door-to-door from his hip Oakland neighbourhood to the green-roofed Meta (Facebook)¹ campus. What is less frequently noted is the densely interwoven military-industrial-academic complex, underwritten by Cold-War federal funding, that transformed this valley from apricot orchards into the world’s foremost technology region in the middle of the 20th century.

Lacking a cohesive masterplan, the collection of regional cities that make up the Santa Clara Valley evolved a sophisticated network of venture capital, federal development funds, aerospace- and defence-manufacturing facilities, machine shops, semi-conductor and camera-equipment laboratories, universities and research institutions. The density of these interconnected activities, termed the “Regional Advantage” by sociologist AnnaLee Saxenian in her book of the same name, incubated one of the world’s pre-eminent technology regions.

With my disembodied drone’s-eye view of the freeway below me, I can see Apple Park, designed by Foster + Partners, constructed on a parcel of land previously owned by Hewlett-Packard. To the left is the original Apple headquarters, Infinite Loop (built by the Sobrato Organization in 1993). The two

buildings illustrate the two prevailing architectural styles in Silicon Valley: one without Steve Jobs’s influence (Infinite Loop was built during his hiatus from Apple) and one with. During Jobs’s tenure, Apple began experimenting with architecture through its first Apple Stores, opened in 2001. Apple Park – and similar starchitecture designs for Google and Meta – hold much of the focus on Silicon Valley architecture. Less well-known is the volume of other properties in the Apple property portfolio: clusters of bland two- to three-storey tilt-ups that pattern both Cupertino and Sunnyvale to the north. Sunnyvale also hosts a large number of Alphabet-Google² leased properties and purpose-built projects, including the in-construction Google Caribbean office blocks that have been designed by Bjarke Ingels Group and which are surrounded by Lockheed Martin aerospace factories and offices. On the other side of Moffett Federal Airfield, home to the Nasa Ames Research Center, the giant glinting canopies of Google Bay View and Google Charleston East – both designed by Bjarke Ingels Group (BIG) and Heatherwick Studio – come into view.

Heading due west, I hit the infamous Page Mill Road and Stanford Research Park, where generations of Stanford University spin-outs and start-up hopefuls had their first offices, such as Hewlett-Packard, Varian and the ill-fated Theranos. I drift north, crossing grids of suburban housing until I come to the Frank Gehry-designed Meta campus in Menlo Park: three linked buildings that stretch for almost a mile alongside the wetlands and salt evaporation ponds that edge the San Francisco Bay.

From London, I load up the 3D model of the vast Meta MPK 20 (Menlo Park Building 20) that I’ve been creating in the gaming engine Unity (San Francisco) and manoeuvre my way around its Aeron desk chairs, past its meeting pods plastered with posters and the helium-filled mylar balloon numbers that bob above some of the desks, before coming to pass underneath a black drone with a 42m wingspan suspended above a group of desks – a prototype of Meta’s solar-powered Aquila plane, a now cancelled “moonshot project” to bring internet to remote regions. All of these are rendered replicas of what exists in the real campus.

1 Facebook, Inc. was renamed Meta Platforms, Inc. in 2021. Meta owns Facebook, Instagram and WhatsApp. In this article, I will use Meta.

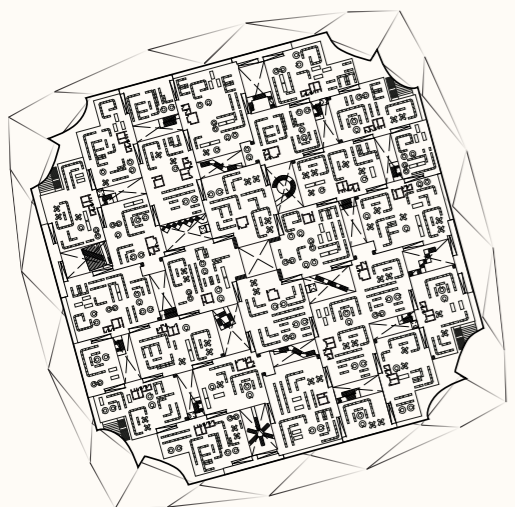
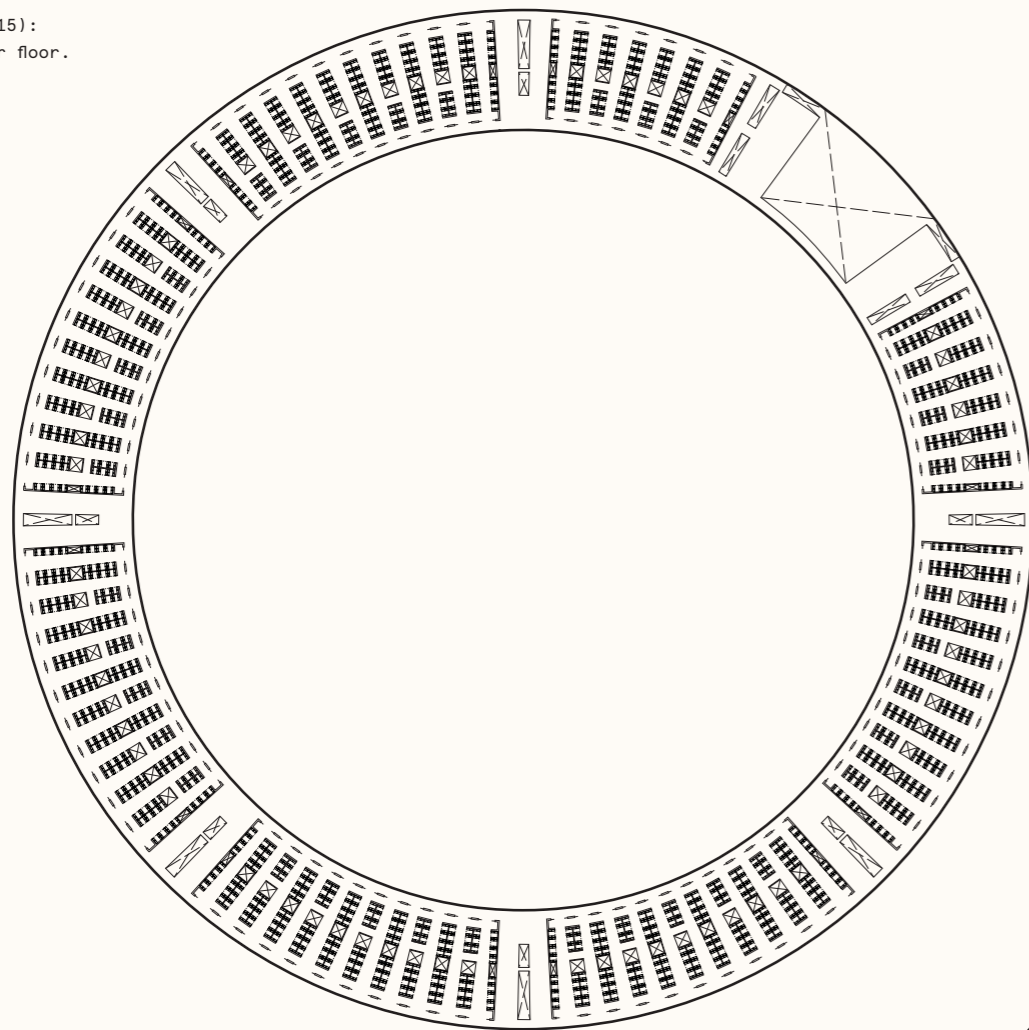
2 Alphabet Inc. is the parent company of Google LLC, and a number of other subsidiary companies. Alphabet itself does not deliver products or services and, as such, I’ll be using Google. YouTube sits in the Google division.



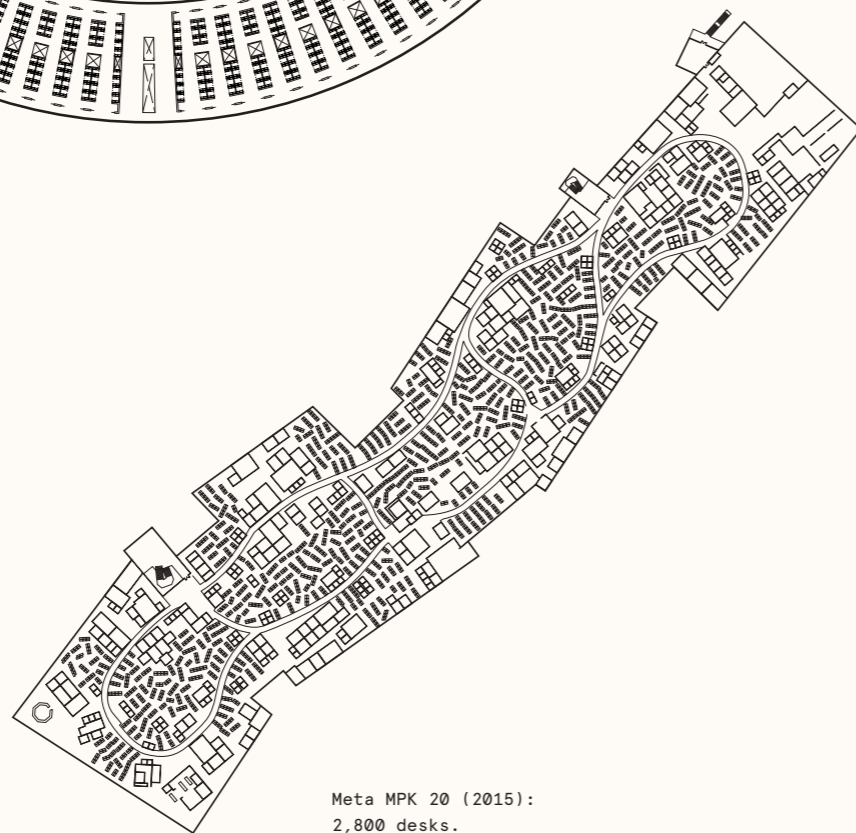
A figure-ground diagram of Silicon Valley showing properties leased or owned by Apple, Google and Meta (satellite image: Google Maps).



Apple Park (2015):
3,000 desks per floor.



Google Charleston East (2023):
2,700 desks.



Meta MPK 20 (2015):
2,800 desks.

I arrive at Mark Zuckerberg’s desk in the centre of the room, identical to the other 2,799 desks but for a buck-toothed whale called “Munko” that has been spray-painted across the white table-top. Munko is the signature of David Choe, a graffiti artist invited by Sean Parker (the Napster billionaire who fronted Facebook in 2004) to tag the then start-up Facebook’s office in Palo Alto with explicit murals. Choe was paid in Facebook stocks worth \$60,000 in 2005 and became a multimillionaire upon Facebook’s initial public offering (IPO) in 2012.

From my desk in London, I have been observing, drawing and documenting the development of the Silicon Valley campuses for five years, exploring the new buildings constructed by Apple, Google and Meta using the very same technologies and platforms that these companies produce. Because it is the world within which I work, it is important to situate this research within the contemporary labour conditions of higher education – where academic teaching loads are increasing, research time is diminished, and very few funding opportunities to support this kind of research exist. With little to enable it, research takes place during fragments of time before or after teaching, or during the weekend – and yet these restrictions have yielded a methodology consistent with the topic.

I’ve used the publicly available City Council planning portals of Menlo Park, Mountain View, Sunnyvale, Cupertino, and San Jose to monitor the progress of proposals by the big three companies, redrawing the floor-plans of each new campus: Apple Park (Foster + Partners), Google Bay View and Charleston East (BIG and Heatherwick Studio), and Meta MPK 20, 21 and 22 (Gehry Partners).

I have scoured the arrogated news content from *Buzzfeed*, *TechCrunch*, and *Curbed* for leaks and leads on new land acquisitions by Apple and Google; used an Israeli crowdsourced transit-data platform called Moovit to get the addresses of every individual building occupied by the two companies, which are listed on the platform by Valley-based tech workers thanks to the dire state of public transport in Silicon Valley. I cross-reference this information with virtual drive-bys in Google Street View to keep an up-to-date inventory of all the properties leased or owned by each company: Apple Hermosa 2, Maude 3, Mathilda 6, Kifer 4, Google Crittenden, Shorebird, Caribbean.³ Translated into a series of figure-ground drawings, this data makes visible the considerable economic,

spatial and civic impact of the companies on each city – in 2016, the commercial real-estate platform *CoStar* reported that Apple occupied 67 per cent of office space in Cupertino.

Using Instagram, I’ve hunted through scores of photographs of the interior of MPK 20 for images of the digital wayfinder screens that workers in the campus use to navigate the vast space, compositing these together into a single map to reverse-engineer a floorplan that itemises each of the 2,800 desks. From Zuckerberg’s own Facebook page, rewatching his inaugural “Facebook live” stream of MPK 20 several times, I’ve been able to determine the exact location of his desk, paying attention to ambient audio and nearby objects: noise from a coffee machine frother tells me one of the three cafés in the building is in the vicinity; a pair of glass-walled meeting rooms – one for Zuckerberg, one for former COO Sheryl Sandberg – confirms that the location is in the centre of the building; a folding Lumio Book Lamp I’ve spotted in photographs narrows it down to a cluster of six desks.

Starting with MPK 20, I am reconstructing 3D models of these spaces from the 2D plans, making navigable, virtual-reality environments that interrogate the spatial relations between architectural elements and interiors, media, objects and management culture.

I am frequently asked, “Have you been there?” – meaning the real Silicon Valley, meaning inside the buildings I’m investigating. Behind this lurks the question: “How do you know that this information is accurate?” Such is the belief in ethnography as an objective record that an architectural study of an existing building warrants a site-visit. I, however, want to challenge the idea that a “truthful” sense of a building can be gained solely through wandering inside it, observing first-hand the workers going about their day.

In the case of the tech-campuses of Apple, Google and Meta, the buildings are actively constitutive of the companies’ management styles, and offer a full spatial and media immersion into their narratives, myths, and values – some critical and geographical distance is helpful. Would my position as an academic make me more immune to the effects of immersion than

³ Hermosa 2, Maude 3, Mathilda 6 and Kifer 4 are just four buildings in Apple’s extensive list of properties in Cupertino and Sunnyvale. Crittenden, Shorebird and Caribbean are Google campus and building names in Mountain View and Sunnyvale. YouTube sits in the Google division.

an employee? Are the employees just as cynical as architectural researchers when they see a poster reading, “WHAT WOULD YOU DO IF YOU WEREN’T AFRAID?” inside Meta’s campus.

The question of who gets to see inside these spaces, and what can be revealed through either photography or writing, is about both privilege and control, governed by subjectivity on the side of the visitor and non-disclosure agreements (NDAs) on the side of the corporation. What trades take place and what legitimacy is earned for research – or lent to the companies themselves – in engaging in this game? If I sought physical access to these campuses, would I disclose the criticality of my research – and would that limit what I was allowed to see? Or would it be used by the company to demonstrate that they are open to critique?⁴ Would it be relevant to reveal that I am both queer and a feminist? Would this determine who was chosen to be my tour guide – the face of the company who greeted me and became my companion (and watchful eye) for the duration of my visit?

In addition, whenever visitor or public access to architecture is either limited or restricted entirely, or curated by company representatives, is what we experience in person any less a media construction than the images of these campuses circulating online?

While I likely could gain legitimate access, being an academic researcher affiliated with a university, I have chosen not to as a methodological limit for dealing with what I call “proprietary architecture”, after the term “proprietary technologies”, which relates to software, tools and systems developed for sole use within a company, or locked to a proprietary device (such as Apple iOS). I have designated as “proprietary information” that which can only be acquired by special permission, or is owned by companies or institutions – in contrast to publicly accessible information in libraries, open-access archives and internet media.

Critical Drawing – Evidencing, Fictions, Errors

If architects draw what doesn’t yet exist, and historians draw what once existed (and often cannot be visited any more), what is illuminated by drawing that which

exists but cannot be accessed? Drawing offers a way of seeing through the walls of proprietary architecture that physically excludes the general public, restricts or curates the view of visitors, and also aims to keep information about the company inside. Much of this is to contain leaks about the proprietary technologies its owner produces.

If architects draw what doesn’t yet exist, what is illuminated by drawing that which exists but cannot be accessed?

There is an extraordinary volume of written and visual information available on this architecture within the digital public realm: much of it produced by the companies themselves in the creation of their corporate culture and purpose-built campuses. Investor pages and official company documentation from Apple, Google, and Meta’s corporate web presence provide some of this, along with an additional stream of images and videos distributed through their own (and one another’s) media platforms, such as Apple Podcasts and Apple TV, YouTube, Facebook and Instagram.

There is also a considerable amount of visual content created by employees, visitors and “fans”. All three corporations have unofficial mediators of their company culture: *MacRumors* and *9to5Mac* aggregate gossip, leaks and syndicated news articles about Apple Park, while influencers use Instagram and YouTube to document campus visits to MPK 20, 21 and Google Bay View.⁵ Videos created about the Meta and Google campuses are often formulaic, featuring the company sign and other corporate perks – free lunches, video games and pinball machines, ice-cream and snacks, and vending machines dispensing IT kit including keyboards, mice, dongles and cables. Further video content created by tech-workers such as ‘First Day in the New Office’, ‘Day in the Life of a Google Engineer’, and ‘How to get an interview at Meta’, are semi-endorsed.⁶

⁵ Google Charleston East, adjacent to the Googleplex, is yet to open.

Information extracted from these images and videos about the buildings is arranged, through drawings and 3D computer models, into new forms to produce an equivalent knowledge of the buildings – or perhaps an even more detailed one – than that which I would witness on a site visit.

In my research, temporally and spatially diverse media that offer glimpses into separate parts of the campus architecture can be drawn into a sequential narrative, in which written and textual information in the public realm can be located in a plan and given spatial meaning. This method is closely related to the practice of Forensic Architecture,⁷ which investigates institutions, governments and entities that operate out of public sight. I use the devices and conventions of architectural production – computer-aided design software, the floorplan, the figure-ground drawing, and the map – as investigative tools and objects.

This practice draws on a lineage of artists and film-makers using documentary materials in the public realm as their source materials – such as Mark Lombardi, Mike Kelley, Hito Steyerl and Harun Farocki – and who use the tools of image-making to construct powerful new narratives including drawing, physical and digital model-making, and film-making. Within contemporary architecture, the aforementioned Forensic Architecture is an important reference, as is terminology such as “research architecture” and “critical spatial practice”. The latter is a term coined by Jane Rendell to describe an interdisciplinary form of research that sits between between architecture, critical theory, critical geography and art practice. Research architecture, meanwhile, is an emerging term defined by architectural historian Kazys Varnelis as the processes “of information gathering, analysis, and synthesis that an architect undertakes in the early phases of design,” yet rather than this synthesis taking the form of a building, a more analytical output can result in formats such as exhibitions or books. In these forms of practice, architectural tools are used for critical speculation, response or provocation.

In each of these practices, information is synthesised, and arranged with a clear critical,

⁶ Semi-endorsed insofar as they are not made by Google or Meta, but are generally allowed by the companies unless they contain controversial material.

⁷ A multidisciplinary research group based at Goldsmiths, University of London.

editorial and curatorial interpretation – unlike “data visualisation”, which aims to translate existing data into visuals whose data points are generated through so-called objective or automated data sets. Instead, data points are hand-gathered, often subjective, and subject to error, misremembering, and incompleteness.

Mike Kelley’s *Educational Complex* (1995) is a recreation – in the form of a 5 x 2.5m architectural model – of every educational building he experienced from childhood through to university, including his own childhood home. Kelley sketched out the classrooms, sports halls, corridors and lecture halls from memory, but struggled to make sense of the spatial relationships between these spaces. Realising that he would be unable to recreate 3D models from these distortions, Kelley instead turned to blueprints and photos of the buildings, extensively researching them to reconstruct architectural models, into which he would place his own remembered architecture, with gaps in his memory depicted as filled-in solids. Kelley’s aim was to use the sharp contrast between the architectural details drawn from research and the incompleteness of the interior to visualise institutional violence – where all sites of blankness and memory loss evidenced trauma. Kelley, however, found that around 80 per cent of the spaces in which he spent every day, for up to four years, were either misremembered or could not be recalled at all.

While Kelley’s memory distortions are clearly attributable to time – the work was tracing 40 years of memory, after all – his colleague and critic John Miller noted that Kelley’s work reveals the “contextual nature of space itself” and how we experience it, rather than “memorising every last detail”. In a monograph on *Educational Complex*, Miller proposes that “one feels the way as one goes along, guided by familiar reference points.” Kelley’s work exposes the great difficulty in recalling buildings as spatially accurate configurations, and that the logic of recollection often distorts spatial relations. “The apprehension of space is an ongoing endeavour,” Miller writes, “not a final aggregate – even if the apparent fixity of architecture suggests otherwise.”

This, in turn, provokes critical questions about the reliability of a site-visit and accessing a building in-person, as well as the process of witnessing in real time and space, and then recalling later. While we often valorise first-hand observational accounts, Kelley’s work highlights two distinct operations

⁴ See Fred Turner’s 2015 essay ‘The Arts at Facebook: An Aesthetic Infrastructure for Surveillance Capitalism’ for further discussion of this issue.

between observation and recollection – particularly within a context where photography is often prohibited or restricted, and where vision is obscured by the mechanisms of a sanctioned tour – an experience in which a critical eye is mediated by representatives of the company and attention is distracted by the signing-in procedure. In this way, through examining media produced about a building, the pulling together of drawings and photographic records from multiple sources equates to a legitimate spatial narrative.

Forensic Architecture also explicitly works with errors of memory. Rather than discounting them as unreliable, the practice instead uses them to reveal asymmetries of power in the ability to tell a cohesive story. Eyal Weizman, Forensic Architecture’s founder, highlights how states and corporations have access to higher resolution tools and technologies than individual citizens, and, therefore, greater means of documenting evidence. “Aesthetic investigations,” Weizman writes in *Investigative Aesthetics* (2021), co-authored with Matthew Fuller, “have a double aim: they are at the same time investigations of the world and enquiries into the means of knowing it. They deal with the production of evidence while questioning and interrogating the notion of evidence, and with it the cultures of knowledge production or truth claims that it relies upon.”

Corporate actors are powerful because they look at us, and make money from capturing an extensive volume of data from the traces of our behaviours, desires and networks in what we search for, purchase and communicate between our friends and followers. As Shoshana Zuboff writes in *The Age of Surveillance Capitalism*, Google, Meta, and other tech companies, trade in “behavioural futures”, offering tools that facilitate our social and personal lives, work and leisure. Apple, while not depending on the sale of users’ data, provides the hardware that enables this data to be trackable in the physical world, and platforms Google’s search engine as the default browser on iOS devices, reportedly receiving a fee each year from the company for doing so. Zuboff details the great asymmetries of power in this transaction and how each company’s business is not serving us – “we are not the client”. Rather, our data is the product extracted from us and then sold on to other corporations, states and institutions.

It is possible to return this surveillant gaze, albeit at far lower resolution – and at greater cost in resources

of time and manpower. The drawings I create are an assemblage of publicly available data, images and personal accounts that are brought together into what Varnelis calls a “cohesive whole”. Snapshots of a building taken at different moments are collected into a single image with information overwrites, meaning that drawings are repeatedly patched and updated like software. This is a means of rendering visible the interior of spaces that are difficult or impossible to access.

These drawings are different from the architectural plans published by design magazines and the public-access records held by the city planning departments, which often precede a building’s completion and are without furniture, décor and temporary objects. My drawings document the current inhabitation and use of each building, recording temporary architectural features and furniture; amenities and event spaces; and the location of the CEO’s desk, specific teams of workers, and objects and motifs that relate to meaning making within the company.

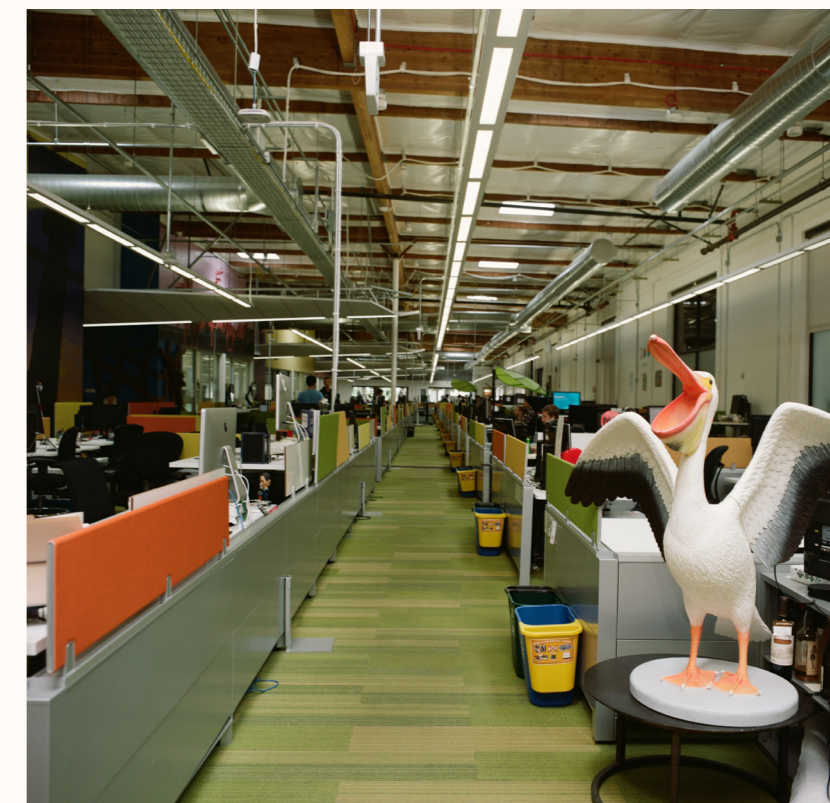
Some drawings are taken further into 3D-rendered models for viewing as artworks or installations. *The Model Worker* (2019), exhibited at Watermans arts centre in September 2019, is a VR model of Meta’s MPK 20 that documents the use of printed media and artworks displayed on the campus walls, which have been produced or commissioned by the company to narrate its myths, values and mission.

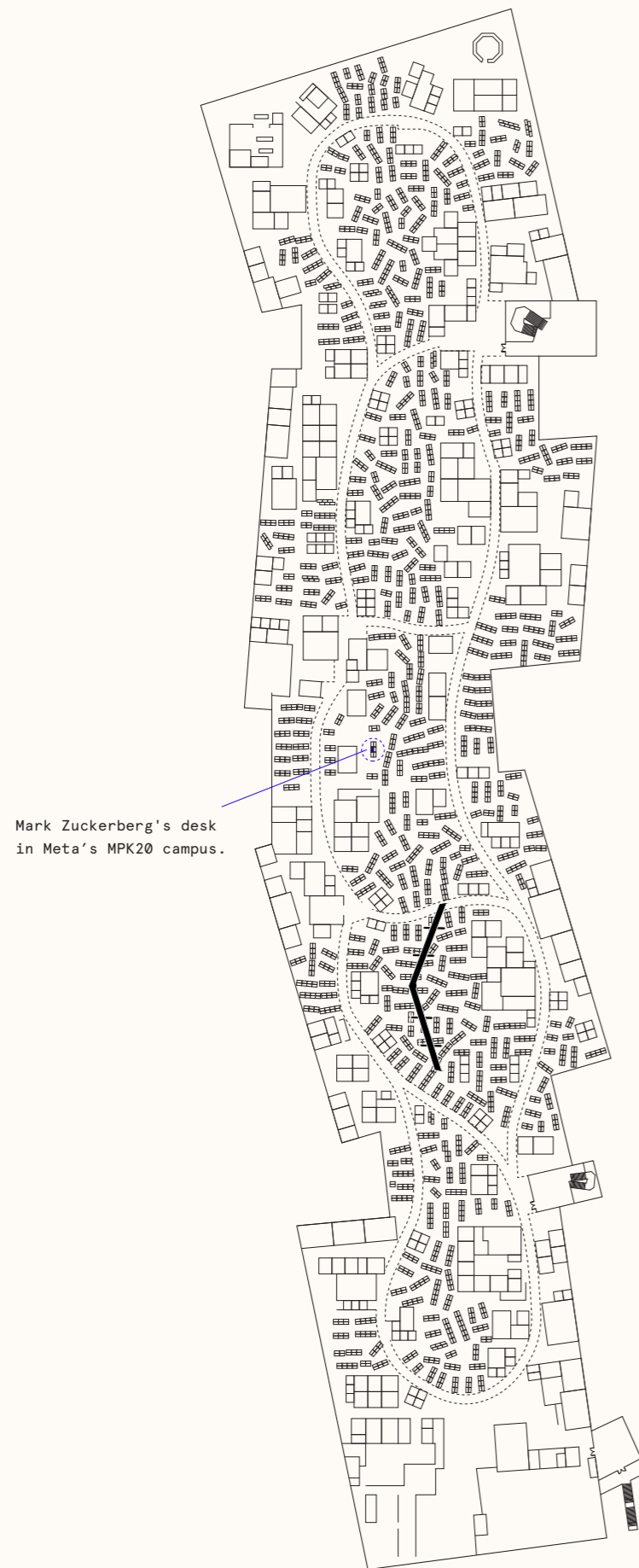
The architecture of Silicon Valley is, on-the-whole, inaccessible to the general public. Apple, for instance, keeps visitors to its flagship campus at the periphery of the site. In the visitors’ centre they can view a large white model animated by an augmented reality iPad app or they can buy a coffee at Caffè Macs, which repeats architectural details used in the main campus. At Google, the open courtyard of its Googleplex corporate headquarters will soon be contained by palisades connecting the four buildings, with the public route through Charleston East that was promised at planning stages now in the process of being withdrawn.

The workings of corporate power are similarly opaque, yet these companies are central protagonists in contemporary debates about governance and surveillance, and their technologies are pervasive. In an investor letter in 2012, Zuckerberg wrote that “Facebook was not originally created to be a company. It was built to accomplish a social mission — to make



A composite of interior renders of Apple and Google’s campuses, amalgamated to suggest a generic Silicon Valley campus.





Mark Zuckerberg's desk in Meta's MPK20 campus.

the world more open and connected,” simultaneously disavowing its corporate vision while claiming a top spot on the Nasdaq. Zuckerberg’s words coincided with the period in which Cambridge Analytica was collecting data from up to 87 million Facebook users’ profiles without their consent.

The amount of information and media produced by the companies themselves evidences an intentional intertwining of architecture and media: as each campus was opened, previews and access were managed with acute media and brand awareness. When Meta’s MPK 20 opened in March 2015, for instance, 15 Bay Area-based Instagrammers were invited to document the opening as part of an event led by Jeffrey Gerson, Instagram’s community product lead. Under the hashtag #MPK20firstlook, they recorded their tour utilising the tropes of the app – spotlighting vibrant art created by Meta’s artist-in-residence, high-contrast shots of Gehry’s geometric and material flair, and sunshine-occluded outdoor photographs taken from the roof-garden. Any photographs of the workspaces themselves were reportedly removed – the architecture on-record is largely defined by various lobbies and circulation spaces, colour-pop soft furnishings and gardens. Needless to say, these are not the main spatial operators of the campus.

Google, on the other hand, created its own content of its Bayview Campus, distributed on YouTube, featuring the engineering highlights of the building. This short film included the campus’s architects Bjarke Ingels and Thomas Heatherwick, architect Michelle Kaufman who heads up Google’s R+D lab for the built environment, and Google’s in-house estates team. Sundar Pichai, the CEO of Google, was not featured. For print and web media, Google also commissioned architectural photographer Iwan Baan to take official photos of the campus.

In the case of Apple, *Wired* magazine was offered the official preview of Apple Park as part of a story penned by editor at large Steven Levy, and shot by Dan Winters – a photographer famed for atmospheric celebrity portraiture, and documentary photography around his own interests in the aerospace and shuttle programme. The campus’s architect Norman Foster was name-checked, but not the centre of the discussion – instead it was Jony Ive, Apple’s then head of design, who gave the tour and fielded much of the discussion that followed Apple Park’s launch.⁸

The architecture of Apple Park has also taken on a distinctive narrative role in the company’s product launches, replacing the auditorium-based presentation format that was established by former CEO Steve Jobs. Transitions in the presentations are now spatialised using a mixture of real, fictional and virtual spaces connected by drone flythroughs and CGI trickery, giving each new product a new location. The main and ancillary buildings are connected in Bond-like narratives – the special projects lab is depicted as hidden underground beneath the pond in the centre of Apple Park, whereas, in reality, it is in a pair of sleek but low-key, two-storey buildings on Tantau Avenue – tucked behind bushes alongside the visitors’ centre.

Spatialised Cultures

Silicon Valley has become a relevant topic of inquiry within the architectural profession. This is less for the architecture itself – which has not drawn favourable reviews – and more for what it demonstrates: power, permanence, and the profound influence of digital companies on work, life and cities. This analysis attempts to deal with the contradictions of companies that aim to “make the world a better place”. While each company maintains that they are merely a technology or platform, they are nevertheless contributing to a regional economy that, were it an independent country, would have a GDP second only to the state of Qatar according to World Bank estimates.

Details and insights mined from the extraordinary volume of images, video and text circulating online about these companies can be used to reconstruct each case study building in order to tell an architectural story that is about more than form, tectonics and programme. Apple Park is not a panopticon, for example – the open-plan drawings circulated in the press give a misleading sense of visibility. In reality – although this is rarely drawn on a plan – each floorplate is divided into eight segments, subdivided further into 80 discrete sections within which teams work, replicating the compartmentalisation of the company. As Philip Steadman explains in his 2015 *Nexus Network Journal* study of “architectural doughnuts”, buildings such as Apple Park are rings where there is no single point from where you can

⁸ Ive later countered criticism of Apple Park’s architecture in an interview with *Fast Company*, saying, “It’s not for you, it’s for us.”



A still from *The Model Worker* (2019), showing a virtual reality recreation of the Meta MPK20 campus.



get an overview of workers, apart from, in Apple Park's case, the triple-storey canteen that accommodates up to 4,000 employees at a time. The view is instead an endless curved corridor, with partitions perpendicular to the corridor, inside which glass-walled offices are tucked behind custom, maple-timber veneer panels.

The architectural story told through drawings of these buildings is a parallel development to – but quite different from – the architectural history of the office, and of corporate architecture and power.⁹ The tech giants' campuses are a suburban typology. The lineage of the Apple, Google and Meta campuses can be found in companies established in mid-20th century Silicon Valley – Intel, Hewlett-Packard and Xerox – aerospace and defence contractors such as Lockheed Martin, and Stanford University. As such, this lineage prompts us to update narratives of architecture modelled on Michel Foucault's writing about discipline and punishment, where a building's form was emblematic of its power, and control was orchestrated through panoptic visibility encoded in the arrangement of walls, floor layout and locations for observation.¹⁰ The campuses of Apple, Google and Meta do not represent power – they enact power and organise it through spatialised management protocols such as the “all-hands meeting” at Meta and Google, or “code-red sprints”,¹¹ and through meaningful objects that codify belonging and bring meaning to the work of code-reviewing and debugging.

Apple, Google, and Meta all celebrate having risen to corporate power as if by accident, valorising tales of “the hustle”, and of humble company origins in garages and dorm-rooms. Meanwhile, the sheer volume of land leased, bought and developed by them continues to transform Silicon Valley. Each company owes its success, however, to California's military-industrial-academic complex – a landscape

in which the pervasive biases of algorithmic decision-making and corporate power, defence infrastructures, and technological objects and platforms are enmeshed in a globalised flow of data and logistics. Designed in California, assembled in China – so runs the famous Apple epitaph engraved on every iPhone. It is a symbol of a corporate infrastructure that has leached beyond its physical boundaries to become, in the words of Banham, a “globalised consciousness”. However, by working in the shadow of the technologies these companies use to reach into us, we may be able to look back into them through alternative modes of architectural research practices: reconstructing what has been designed and constructed in Silicon Valley, and re-assembling it in virtual space. **END**

9 For further reading on this parallel history of architecture, see Stuart W. Leslie's *The Cold War and American Science: The Military-Industrial-Academic Complex at MIT and Stanford* and Reinhold Martin's *Knowledge Worlds – Media, Materiality, and the Making of the Modern University*.

10 Foucault's own writing on discipline and institutional control is superseded by his later writing on neoliberalism – no longer exerted upon an individual directly by management from the outside, but a process of alignment of the inner desires of employees with the company objective.

11 Both these protocols derive from factory processes pioneered by Toyota. For further discussion on management performances, and how performance has come to replace discipline in the workplace see Jon McKenzie's *Perform or Else: From Discipline to Performance*.