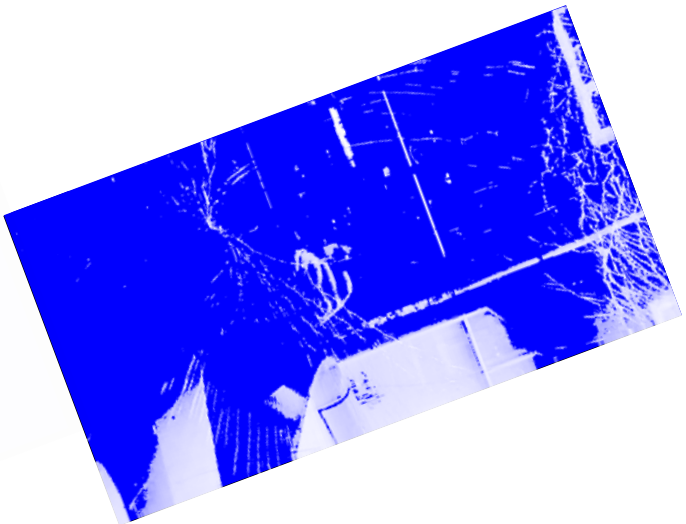
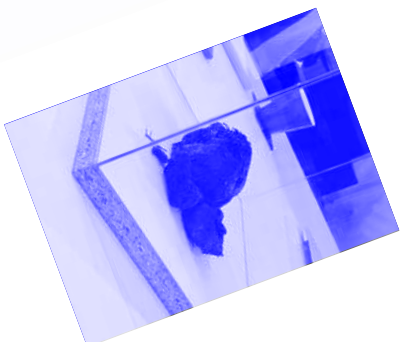




Eindhoven Footnotes

1 Criticism in the City

Criticism in the City

Josh Plough

"Don't start from the good old things but the bad new ones."– Bertolt Brecht

Eindhoven Footnotes is a grassroots project investigating the lived experience of citizens in a technocratic city. Through the lens of design, writing, researching, archeology and artistic practice the city is investigated both speculatively and critically by an editorial board overseeing a group of students and citizens. There have been countless previous projects, interventions, books and research papers that deal with issues like surveillance, nudging, behaviour mapping and the quantification of the self. So why do we need another one? The glib answer would be urgency. While there's no doubting our global situation, when used in the context of design, the word can sometimes end up becoming a synonym for "we're all fucked anyway, so why not?". But it feels like urgency is not the only answer, there's something else in the air. Protest maybe? This subject is tackled in the publication by the social designer Helen Milne who has been instrumental in the city's student housing protests. Her essay 'Eindhoven: Residency, Protest and Digital Presence' reflects on the relationship between physical and digital action.

Footnotes has been providing a platform for different voices while creating a base for critical reflection since September 2018. Our aim is to deconstruct the rhetorics of the #sharethevibe branding strategy and question the presence of 64 microphones and cameras on a single lamp post. We will keep on testing the claims that the city

makes from the bottom up and universalise them through our network. Urban technocracy must be challenged in the very cities that proselytise it.

The social designer Alorah Harman further expands on this when she investigates the relationship between cities and technology in her piece 'Technology Imagines the City'. In her essay, Harman cites the earliest photograph ever taken of people in 1893 as a prophetic image of things to come. This is a subject that the designer and photographer Robin Weidner also touches upon in his visual essay 'Human Technology Interaction'. Here the network is reduced to the interface between people and traffic lights, a system that is often referenced as the genesis of the smart city.

While discussing the above mentioned issues we realised there is still a gaping void between the producer, product and human. It's in this space that corporate and governmental interests can pour in, justifying their existence by saying they're the glue that can hold it all together. "We need this data because it will help the council improve housing; we need to monitor how many times you use the bin to improve services; we need to watch you and map you while predicting and normalising your behaviour (all this so we don't have soldiers on every street corner [1]). We want this data because we can monetise it." The everyday nature of our actions now covers up those of other, more connected parties.

This first iteration of Eindhoven Footnotes is titled 'Criticism in the City' and it's been a challenge working

[1] These are the words of Peter van de Crommert, a project manager with the Dutch Institute for Technology, Safety and Security [*https://www.theguardian.com/cities/2018/mar/01/smart-cities-data-privacy-eindhoven-utrecht*].

out just what criticism in the city actually is. It started out as a pile of horse manure placed in a vitrine. The intention of this was to shock, to force someone to stop and ask why a steamy glass case can be considered an act of allegorical criticism.[2]

Then, after several weekly meetings the idea of developing a toolset to dissect the city was proposed and discussed. Footnotes could be something that would tessellate out and be used by other interested parties. But the notion of developing more toolsets felt counter intuitive. Tools, while they're something we can all share and help position our bodies, also dictate. Throughout the meetings the word frictionless kept coming up time and again. It became a kind of mantra that was chanted at Onomatopee to concentrate our thoughts: frictionless, frictionless, frictionless, frictionless. The smart city is something that thrives off ease of passage.[3] But instead of further greasing the data flows with blood and sweat we should drop like a google pin onto our collective mapping, and instead of sitting neatly on its surface, we must puncture it.

This want for action and the inherent spatial qualities of criticism are coming to the fore of the project. One such example is the conceptual designer Pete Fung's Mobscan,

2 99.9% of the time you can be sure that horse manure on the ground means that they has been a police presence in the city. This is the physical manifestation of power. While Straatumsiend, the longest bar street in the Netherlands, is an example of invisible policing with six smart cameras, 64 microphones and 22 lampposts with mood influencing lighting.

3 If you have the right documents and citizen numbers. Because of the digitisation of the city, vulnerable people are often locked out of simple urban infrastructure like access to rubbish disposal and buses.

a happening he developed that explores togetherness through a digital mediator. Our need for action also manifests itself in the curatorial part of the project as it aims to dissect the space in Onomatopee with the subjectivities of the researchers. Footnotes first attempted to directly serve the public, but having struggled to engage the everyday, it has morphed into a space where students, researchers, technologists, politicians and citizens can transform the space anew each time they use it. It's a place where they connect their thoughts and intentions with our research and with each session new revelations crisscross the space. The aim is to help the public develop a sensitivity towards technology in their smart city.

The rhetorics of design and technology are so embedded in the urban fabric that it's impossible to escape them. This is just one reality of Eindhoven and is further interrogated by the designer and writer Callum Dean is his piece 'Citizenship & Capital in @EindhovenCity'. In the essay he examines branding and technology and asks who is that actually lives in @Eindhoven? A pertinent question as there is a separation between its online image of a techno-utopia and our heavily surveilled reality of bike paths and Albert Heijns. On the city's website Wired magazine is quoted as having said 'Eindhoven is a design city that will show you what the future looks like'. This blind faith in what the marketing organisation of Eindhoven peddles highlights how an image of a city can be constructed and sent out to a world that will, most likely, never visit it. Eindhoven, and the research that is carried out in it, must primarily remain local to it, as it's the people who live here that have toexperience what it means to live in this so called future.

To really get to grips with this 'city in transition' then research must transition with it. Knowledge must be activated through the work of the architects, designers and software developers who live and work in it. Now more than ever it seems the unstoppable march of progress and technology is so far gone that we are resigned to either not understanding it, or being so overwhelmed that we feel powerless in the face of the sheer walls of its black box. The physical presence of these things on the streets is dealt with through a conversation the designer and writer Colin Keays has with the 'About Us' section on the CityBeacon's website.[4] Because of technology's ability to manifest itself in material and immaterial ways Footnotes must transition from its case study mentality to its methodological future. We must keep learning from the city as we have been in the last months, this way research can swap its often passive outcome with lasting and meaningful action.

Eindhoven Footnotes has meant Onomatopee has extended design and art research into the Archeology and Heritage House, Eindhoven in Beeld (the picture archives), the 15th Architectural Humanities Research Association Conference, the local market and public meetings. Through this, networks have been developed between politicians, council members, student protest movements, local radio stations, academics, students and the public. Whatever criticism in the city is it will define itself through action, not by walking on well trodden paths but by digging, acting, dancing, intervening, deleting and meeting. Throughout the project the one thing we can ask with confidence is: 'If a city projects, what do its citizens emit?' All Welcome, All Free.

4 CityBeacons are the emblems of Eindhoven as smart city. They act as interfaces between the network and citizens.

Citizenship & Capital in @EindhovenCity

Callum Dean

If you live in Eindhoven, you will have almost certainly seen the city's 'Share the Vibe' campaign on one of the CityBeacons dotted throughout the city, or perhaps (though less likely) through the @EindhovenCity Twitter account. According to the promotional text of Share the Vibe, its motives are very simple: "Eindhoven is full of energy [...] The Eindhoven brand is a symbol of energy [...] The 'vibes' from the brand logo are free for every person in the to invest their energy in." Though the text is obscure and devoid of any significance to the average person's daily experiences, the centrality of 'energy' in urban life is intended to be understood as a given. This rhetoric of 'energy' in Eindhoven doubtlessly owes whatever currency it has to the massive cultural and economic presence of Philips, and the wider mythology of the modern design movement in the Netherlands,[1] but the significance of this term would be understated if read in this way alone. 'Energy' here finds its political utility in perpetuating the neoliberal ideology of the boundless production of capital.

1 In '*What is a designer*', Norman Potter writes that one of the central principles of the modern movement was "the translation of mass into energy and relationship." While the modern movement was drawn to the destabilisation of prior forms of existence, Potter claims that "its effort was betrayed (forgotten) in the take-over by the complicated apparatus of commercialism."

Addressing an audience at the Stedelijk Museum in 1960, the Dutch artist and member of the Situationist International, Constant Nieuwenhuys pronounced that "The modern city is a thinly disguised mechanism for extracting productivity out of its inhabitants, a huge machine that destroys the very life it is meant to foster."[2] Today, not only do we continually and unwillingly generate economic value through the commodification of everyday activities into datasets, but the techno-state apparatus further calls upon us to participate in active digital labour, either by creatively contributing to the corporate identity of the city, or by "sharing the vibe." In terms of contemporary urban theory, the campaign seems to be an attempt at generating 'social capital', which Margit Mayer, the Berlin based Professor of Political Science, describes as a process of of "turning 'the social', i.e. something non-economic, into (a form of) capital, and social relations into context-independent causal relations."[3]

Sure enough, further on in the Share the Vibe promotional text, the language of social inclusivity comes up, rather comically in response to its own biases: "The image makers involved are not just any old Eindhoven residents. They are unconventional players with world-class names. But Eindhoven is not about hierarchy. It is the city of the collective, of sharing and enriching." Contrastingly, by drawing attention to the symbolic capital[4] of these 'unconventional players' (who could otherwise be described as professional creatives), the campaign reveals the fact

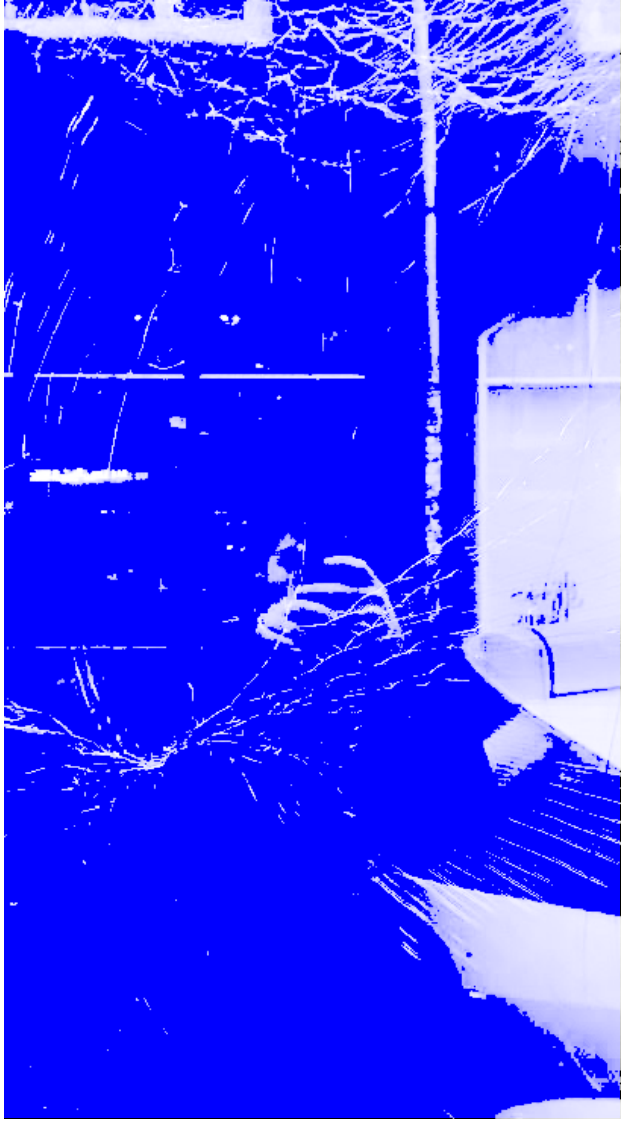
2 Mark Wigley, *Constant's New Babylon: The Hyper-architecture of Desire* (1998).

3 Margit Mayer, *The Onward Sweep of Social Capital* (2003).

4 See the work of Pierre Bordieu.

that the corporate identity of the city is fundamentally biased towards an affirmative and creative entrepreneurial class. The 'collective' described is not one of genuine solidarity between the various and disparate social groups in the city, but merely a rhetorical flourish used to depict a manufactured image of social equality.

While the Share the Vibe campaign promotes the city branding as a diverse and inclusive project, open to all citizens, and indeed existing for their benefit, the structural reality reveals something very different. Those who reject, or are rejected by the identity administered by the city will find outlets which lie outside of the reaches of social capital. The language of the remainder emerges through the cracks of each shattered CityBeacon screen. It comes from those who assert their right to the city, and reject its paltry digital simulacrum. Who lives in @EindhovenCity?



Shattered CityBeacon screen, Willemstraat, Eindhoven, 2018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Eindhoven: Residency, Protest & Digital Presence

Helen Milne

The Struggle Is Real: Protest for Student Housing, Eindhoven, 2018

Criticism in the city can mean many things, but here it provides a platform for understanding the conflicted relationship between the digital image and lived experience of residency in Eindhoven. It was during one of our weekly meetings that these words popped up: 'Research can exist in a space so long as it inhabits it. And just being present, does not equate to presence.' This text explores the connection between inhabitancy, protest and digital presence.

Like all major cities in The Netherlands, Eindhoven residents face a severe lack of housing: what differs is the representation of the issue. Eindhoven has seen exponential growth in population over the past few years; as a result of both company and university expansion, but its residents don't shout as loud about the issue as those in other cities like Amsterdam or Rotterdam. It was only in late 2018, when the city reached a tipping point, that the Gemeente (Municipality) openly addressed the issue for the first time.

How does this relate to the 'digital image' of a technocratic city? The desire for 'frictionless' living is evident here. The Dutch government requires every citizen who plans to stay in The Netherlands for longer than 4 months to register at their local municipality - understandable. However in order to register, and to be awarded the holy grail of residence – a Burgerservicenummer (BSN) - you must have an address, which is a luxury in a city that doesn't have enough available housing for its hopeful residents.

A BSN is required for official online digital interactions, and some physical interactions with the city itself: the digital image and lived experience collide on a regular basis. Basic Dutch health insurance, which is mandatory for all who wish to work in the country, a Dutch bank

account, the right to vote, reduced rate travel on public transport and disposal of waste are only available to those with a BSN. The reliance on this automated and seamless system is an extreme oversight for a country that continually runs into crises over housing. Municipalities do not keep up with their projected goals and image: funding in Eindhoven is allocated to developing technology innovation, but not to housing solutions (temporary or otherwise). The city undermines itself.

"NO HOMES, NO DESIGN, NO DDW, I AM TIRED OF THIS SHIT"

A web of QR codes and officially headed emails cannot tame the chaotic nature of real life, and yet the future citizens of Eindhoven only quietly vent their frustrations on Facebook housing groups: have the residents of this city become so used to smooth, frictionless living that they just accept that this is the way it will be? We Want Woonruimte Eindhoven (WWWE), a grassroots organisation that 'hopes to unite, understand, and catch public attention surrounding the topic of student housing in Eindhoven and the Netherlands' says otherwise.

On 27th October 2018, during Dutch Design Week, We Want Woonruimte Eindhoven organised a protest: 'The Struggle Is Real: Protest for Student Housing, Eindhoven'. Situated in the commercial epicentre of Dutch Design Week, Strijp-S, this protest could be seen as research inhabiting a space. In a city that lacks urgency and disruption, the success and outcomes of this action were unknowable.

Eindhoven's main focus currently is on the expansion and positive image of the city. As part of this, the redevelopment of Stratum (a costly procedure, which includes removing the already acceptable red paving bricks), takes priority over building housing for its residents.

Being present to create 'presence' here was necessary: creating and manifesting an analogue event incites the tension and energy created by collective action. This potential energy is feared, particularly by institutions with a brand image to keep intact.

We Want Woonruimte Eindhoven's call to action was mainly communicated and disseminated by a Facebook event. So much can (and has been) said about this; but in this case, it should be embraced when used for grassroots political action. It is a more economic and faster option than printing flyers and posters, and travels way beyond the geographical location of the protest.[1] Once legalities are sorted, a call to action can be written and posted in minutes; and has the all-important 'attending' or 'interested' button. This creates a digital manifestation of that same disruptive energy of a group of individuals gathered in a space – the act of signalling interest in an event is an act of solidarity, similar to signing a petition.

1 To avoid taking away from the wonderful, rich history of anarchist printed protest ephemera, we also worked to make a recognisable and easily appropriated image for digital and flyering purposes (see overleaf), but these do not perform the same function: they cannot be tracked or used to show responses to the issue.

Through initial connections made at Eindhoven Footnotes to individuals in the city, a web greater than any technology can provide - one of human connection, breakfast meetings, radio shows and phone books, was created - and enabled the potential audience of the protest to grow. Footnotes & Onomatopee, Siem Nozza (Nachtburgermeester), Eva De Bruijn and RaRaRadio, all backed this initial protest digitally and certainly played a part in the dissemination of the message.

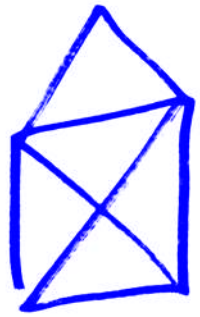
Whether or not the people who clicked 'interested' or 'attending' showed up on the day is not relevant; when successful it creates an intimidating digital presence that hints at disruption, and caught the attention of many significant parties.[2] This concept of intimidating digital presence for grassroots political action is something that needs to be explored more. Organising physical protests is now just one part of a larger action in our digital culture. Particularly in smaller cities like Eindhoven that lag behind others in terms of facilitating applications and self-organised protests, these numbers created by online events are gaining legitimacy.

2 Organisers of Dutch Design Week contacted us via the Facebook event to ask to meet and discourage us from protesting during DDW. Whilst we had been granted permission by the Gemeente to protest in Ketelhuisplein, we compromised to position ourselves outside the Klokgebouw, in favour of a good working relationship with DDW. Our small presence was successfully disruptive: DDW brought in an external security team to police our peaceful protest that day.

In a city governed by stakeholders, that falls short of successful data collection and synthesis, raw data needs to be created, collected and delivered. Without any need for privacy invasion or data breaches, WWWE harnessed dissatisfaction in numbers – numbers the Gemeente so desperately need. The scale of the housing issue in Eindhoven is not fully known because there is no system in place to record the people who cannot register.

This closed loop needs to be broken and a culture of transparency initiated. Grassroots initiatives like Eindhoven Footnotes and We Want Woonruimte go someway to making this happen. By researching, creating presence and demanding meetings with the Gemeente, as well as participating in the initiation of a bestuurgroep and a huurteam, the conversation across the city is widened to include a multitude of voices.[3]

[3] A bestuurgroep is a meeting/action committee compiled of representatives from many institutions involved in housing in Eindhoven; council members, students, board members from universities, property developers etc. Through meetings the group expands the dialogue across the city, working with the council to understand the problem and find solutions where possible. A huurteam is a rental team typically set up by the city or community centres, to assist tenants in disputes about rental housing. Most cities in the Netherlands have this – not Eindhoven (yet).



No home = no BSN, no bank, no insurance, no work.

“GELUKKIGE SLAVEN ZIJN DE ERGSTE VIJANDEN VAN DE VRIJHEID”
| “HAPPY SLAVES ARE THE GREATEST ENEMIES OF FREEDOM”

A photograph of De Bunker from Hans-Joachim Schröter’s book ‘*Eindhoven: Portrait of an industrial city*’ (1971)

A Little About Us

Colin Keays

This conversation is an attempt to reconcile the relationship between the very physical presence of smart city initiatives such as the CityBeacons which dot the streets of Eindhoven, with the ungraspable notion of being seen as a point of data by a series of devices that claim to be "state-of-the-art technology wrapped in appealing form-factors." In trying to gain a better understanding of this tension, the following fragmented conversation has dissected the "About Us" section from the CityBeacon website,[1] posing questions of our remaining agency as a public within this realm of "smart and connected cities."

1 [*http://www.citybeacon.info/#about*].

CB: We believe in an open approach towards cities…

C: Our shared home once had a proud industrial character – of course that time has passed, and the city has transformed. The Eindhoven of 2019 is populated by a series of glossy amorphous blobs, while freshly laid paving provides a stage for what's to come next, amongst former factories, now re-clad with shiny gold aluminium and re-populated with a transient international population. These new frictionless surfaces allow the perfect backdrop for the slender form of the CityBeacons to march your way along the streets.

CB: We are creative…

C: Your smooth exterior aesthetics remind us of the technology contained within – a promise of seamless access to services, when flesh makes contact with liquid crystal. But I wonder where your sense of local character can be found – can Eindhoven be represented in this way?

CB: …We are a team.

C: I watch you, watching me, as you watch each other. But all I see is a smooth vertical form. I wonder who is behind you? Who programmes you, as you follow me across the plaza? By becoming a point of data, we seem to have transformed into technological users of the urban environment,

while the power shifts from the municipality to the hands of technology companies. Is there an assumption that this data you have on us can represent some form of a 'public'? You can't gain a consensus as to who we are based on monitoring and tracking - we, as a public, are made up of infinitely varied experiences.

CB: ...We want to change the world.

C: You stand there, as an unwavering sentry - as a physical presence, watching and waiting, you begin to shift our very understanding of the public sphere. Knowing that we are being watched, it seems that there is a need to justify our very presence in the streets. Surely this is antithetical to the very notion of public space? In a realm that should be open for chance encounters and unexpected interactions with the Other, we might question our own understanding of what behaviour is acceptable, and what is not. The city takes a moralistic position of who is allowed to use the space, while the very visible technology on the street seems to bear a reminder to show that we have nothing to hide. Might this obsessive sense of urban transparency lead to a more homogenous, and normative presentation of what it means to be a citizen?

CB: ...We are learning every day.

C: You collect our data. Harvest it. Hoard it. Wifi tracking technology can count the number

of smartphone users walking down the street. But what can really be learned from me, when I am reduced to a blinking dot? We can each be seen as one point of data among 223,000. But this is not limited to the networks of this city alone - the very nature of big data is the participation in wider systems. Each point is processed, while patterns are tracked, traced and collected to feed global patterns that summarise an average of individual experiences. What I fear is that this will lead to an ever more algorithmically determined urban experience - whether through the colour of lighting, or the presence of police officers, the city will be governed by averages.

CB: ...We are not afraid of mistakes.

C: Public space is turned into a 'living lab'. By walking down the street, we are being treated as non-consensual test subjects in an urban experiment. Smart city initiatives need to be tested. But this complete faith that 'tech will solve all of our problems' fails to recognise the human. Shouldn't there be a more ethical dimension to these public laboratories? An algorithm is only as capable as the information it is provided with: if a commercial interest is able to usurp our needs as the city's inhabitants, it is not truly serving the us. And worryingly, when the data becomes interlinked with law enforcement, how can we be so sure that this data is able to overcome the inherent racial

bias that already exists in this country's police forces?

CB: We are powered by inspiration.

C: You operate in a place that has always strived to be new: technology runs through Eindhoven's veins, and the city has been carved up and reshaped several times in the name of innovation. The advent of smart city initiatives has led to technologies becoming woven into the very fabric of our public space. But a place so obsessed with newness will never be completed. The city feels pristine, but the beauty of the cracks in its surface are made ever more apparent by contrast. Should we really be orienting ourselves towards connected digital systems, or can we look to the remaining power of spaces that do not fit within a techno-normative environment? We must seek out spaces which allow a divergence from expectations, as we discover the glitches that make the city ever more porous and approachable.

CB: ...We Love what we do.



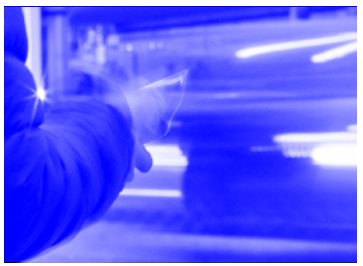


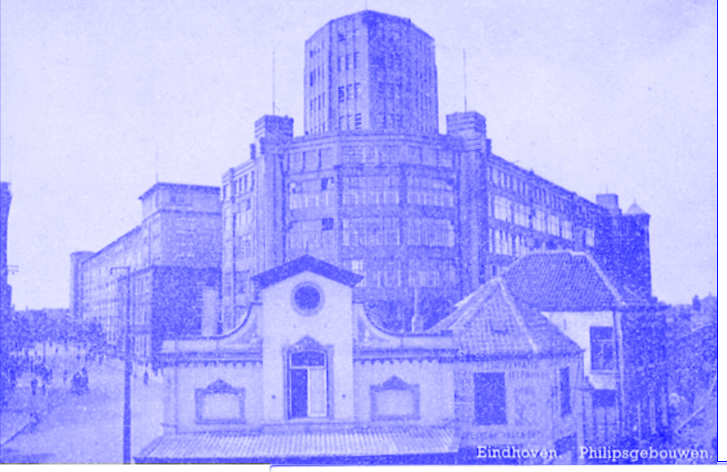








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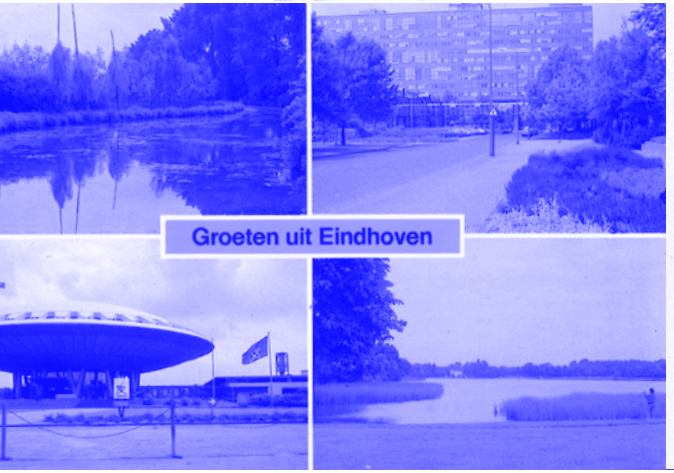
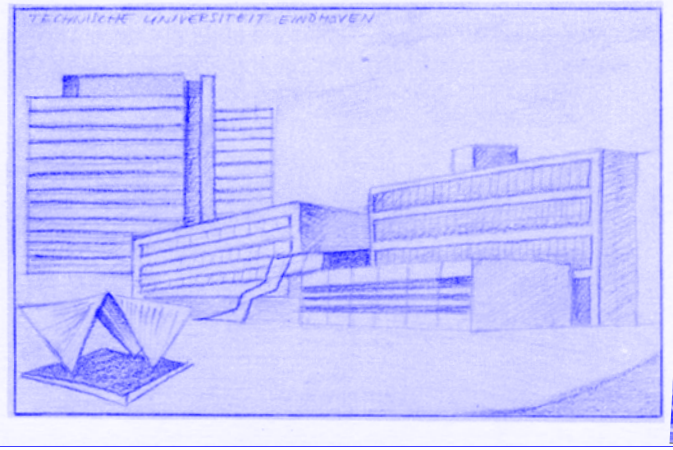




Technology Imagines the City

Alorah Harman

Living in a city like Eindhoven means thinking about the relationship between technology and the city, especially connected technology. Compared to other regions of the Netherlands, Eindhoven has proven to be fertile ground for the neoliberal ideologies that tend to creep in with internet-enabled products and infrastructures. This makes sense. It's a place that was once seen as beyond infrastructure, where citizens looked to the prominent employer Philips rather than the Gemeente for basic needs such as housing, community and a sense of security. Given the past memory of mutualistic[1] corporate relationship, are Eindhovense attitudes willing to favour less regulation, or critical attention towards technology in general? The current mythos seen in discussions of Eindhoven's technological prowess forms a safe innovation narrative. Entrepreneurship and boldness, but in moderation. Experimentation, yet pragmatically tied to the financial. How has this local spirit interacted with global ideas of the smart city and internet imaginaries which continue to flow in from contexts such as Silicon Valley?

1 Was that relationship truly mutualistic? Who benefitted more, Philips or the citizens themselves? Many Eindhovenaren may have strong opinions.

The Image and the City

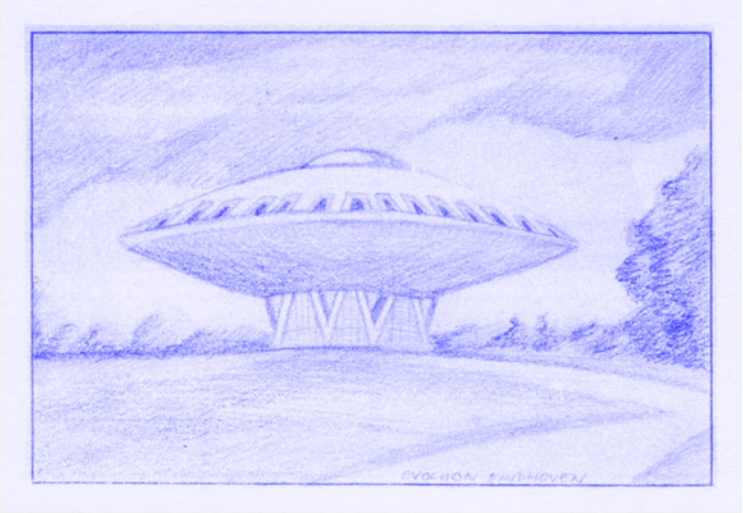
Digital technology has revolutionised the position of the image in society. Today, any smart phone is an instrument of visual data-collection. Simultaneously, any image is potential input to a wide variety of computational algorithms. What does this mean for life in cities? It's fitting that the earliest known photograph of people, a daguerreotype from 1893, is also an image-capture of a city context. In the resulting image, a shoeshine boy and his patron famously stayed in place on the Boulevard du Temple, Paris, long enough to be captured by the technology's 10-13 second exposure time. The other citizens on the street disappeared into the faintest blur, effectively edited from view, and leaving the architecture to tell the rest of the story. It's an interesting parallel that now, promotional videos and visual material used to represent the concept of "smart cities" tend to be hyper blurred. The accelerated images of quickly moving city lights highlight the technological infrastructure, again blurring out any

recognisable people. The visual shift away from recognisable individuals provides a sense of infrastructure as well as a landscape that appears in some way naturalised.

It's interesting how quickly the "authority" of these naturalised images can be accepted when the subjectivity of the human experience appears to be brushed away. Similarly, was the acceptance of the authority and objectivity of satellite imaging systems a precursor to the attitudes we see in current debates about image-based surveillance programmes? 1972 marked NASA's launch of Landsat 1, the first of its earth observation satellites. While the authority of these imaging systems was quickly accepted across the world, and while they were and still are understood as providing a neutral or objective god's eye view, it's worth remembering that their technology is inextricable from the political climate of the cold war.

Here in Eindhoven, signs by cameras in Strijp-S taunt passers-by with: "Sorry to catch you by surprise" and "Smile! We capture your special moments." These aren't neutral things to say, they're quite aggressive. Meanwhile, there are over 426 Dutch surveillance feeds available to watch online. As surveillance gathered visual data begins to dominate, we're seeing a shift away from the human testimonial, even in areas such as human rights.[2] This raises questions about a shift in our power as citizens, as previously we were the ones providing those testimonials. What new forms of sovereignty in the city will appear with the ongoing transition of authority from person to pixels?

2 Consider the increasingly image heavy case-building approach exemplified by Forensic Architecture and Bellingcat compared to the past model of building human rights violations evidence through hundreds of human witness interviews.



We know that smartness, as in the old school intelligence kind, is a key aspect of the Brainport region's[3] branding. Eindhoven supports 22.6 patents for every 10,000 residents, a figure found in a city branding campaign that defines it as "the smartest square kilometre in Europe." In 1627, Francis Bacon wrote the techno-utopian novel New Atlantis, an incomplete work about the future of human knowledge and development. The story depicts a society of scientists where technology is unlimited by any type of "natural" law or justice: oh what a utopia scientist could achieve without uninformed regulations or interference! The critique of Bacon's New Atlantis at the time was that in fact, more likely, bias in its state-sponsored scientific institutions would lead too easily to the negative aspects of Nietzsche's ubermensch or superman

3 Europe's leading innovative top technology region [*https://brainport.eindhoven.com*].

theory, that is, dangerous assertions of the will of individuals over that of society and the environment. Today, this tension is ever relevant. The parable of New Atlantis ties easily into the legacy of urban modernism, when technology became deeply embedded in the process of city making.[4]

In modernist urban visions, we find smart city imaginaries we still recognise today: shining, tall buildings, clean streets with orderly, high-tech traffic infrastructure, and friendly interface elements that anticipate our human needs with perfect precision. However, researcher Federico Gugurullo has criticised these images of supposedly progressive and humanistic technology as simply a "rerun of traditional capitalistic ambitions." The danger of an increasingly connected city, as Gugurullo writes, is that "Here, so-called smart cities become urban engines animating a constant production of new smart devices and services which are commercialised and sold, mainly to generate profit." In this environment, the empty term smartness, just like it's precursor sustainability, is at risk of being instrumentalised by policy-makers and companies in the pursuit of individual ends rather than collective interests. Who is defining what gets to be smart in the smart city?

Connected for Who?

As a relatively homogenous, highly connected, tech-interested, and tech-savvy population, Eindhoven is an interesting sandbox for looking at connected technology

4 The city of modernism was illustrated well in Chicago's Century of Progress International Exposition in 1933, whose motto was 'Science Finds, Industry Applies, Man Adapts'.

issues affecting us at a global scale. Recently, Google targeted Eindhoven as a region of interest for search engine optimisation. Regarding the city as a "digital capital" of the Netherlands, in 2015, the company expressed a goal of training over 30,000 entrepreneurs and business owners in the Eindhoven region within the year to optimise their online presence for search engines.[5] The presence of organisations like Google and SingularityU in the city, with Microsoft and IBM not too far away, remind us of the looming interests of the "Big 5"[6] that continue to shape the digital and physical worlds around us.

Google's "don't be evil" meeting room in Budapest, 2014

5 It's unclear whether they met or exceeded this goal.

6 A reminder that the "Big 5" are Apple, Alphabet (Google), Microsoft, Facebook, and Amazon – 5 companies deciding the future of the internet, and therefore our societies, who have a combined valuation of over $3.3 trillion, and make up more than 40 percent of the value of the Nasdaq 100 index.

Bruce Sterling has written a sharp overview of our changing position as citizens in his recent short primer 'The Epic Struggle of the Internet of Things'. While we are still presented with a narrative of the smart city being about helpful refrigerators that text your cellphone friendly messages, in fact, as Sterling writes, "an Internet of Things is not a consumer society." While we are used to thinking of ourselves as the all important and self-empowered users in relation to the technologies we rely on, we are not the authors, nor even the main characters of the Internet of Things story. The companies are. In her recent book Surveillance Capitalism, Berkman Center Researcher Shoshana Zuboff reminds us: "Nearly every product or service that begins with the word 'smart' or 'personalised', every internet-enabled device, every "digital assistant," is simply a supply-chain interface for the unobstructed flow of behavioural data on its way to predicting our futures in a surveillance economy."[7] As more and more smart city products and surveillance pilot programmes continue to crop up in Eindhoven, it's worth considering: who are the ones interested in our data, and what exactly for?

7 According to Zuboff, surveillance capitalism was pioneered at Google and later Facebook (similar to how mass-production and managerial capitalism were pioneered at Ford and General Motors a century earlier), and has now become the dominant form of information capitalism.

"Information technology produces new knowledge territories by virtue of [...] always turning the world into information. The result is that these new knowledge territories become the subject of political conflict." – Shoshana Zuboff

Mobscan

Pete Fung

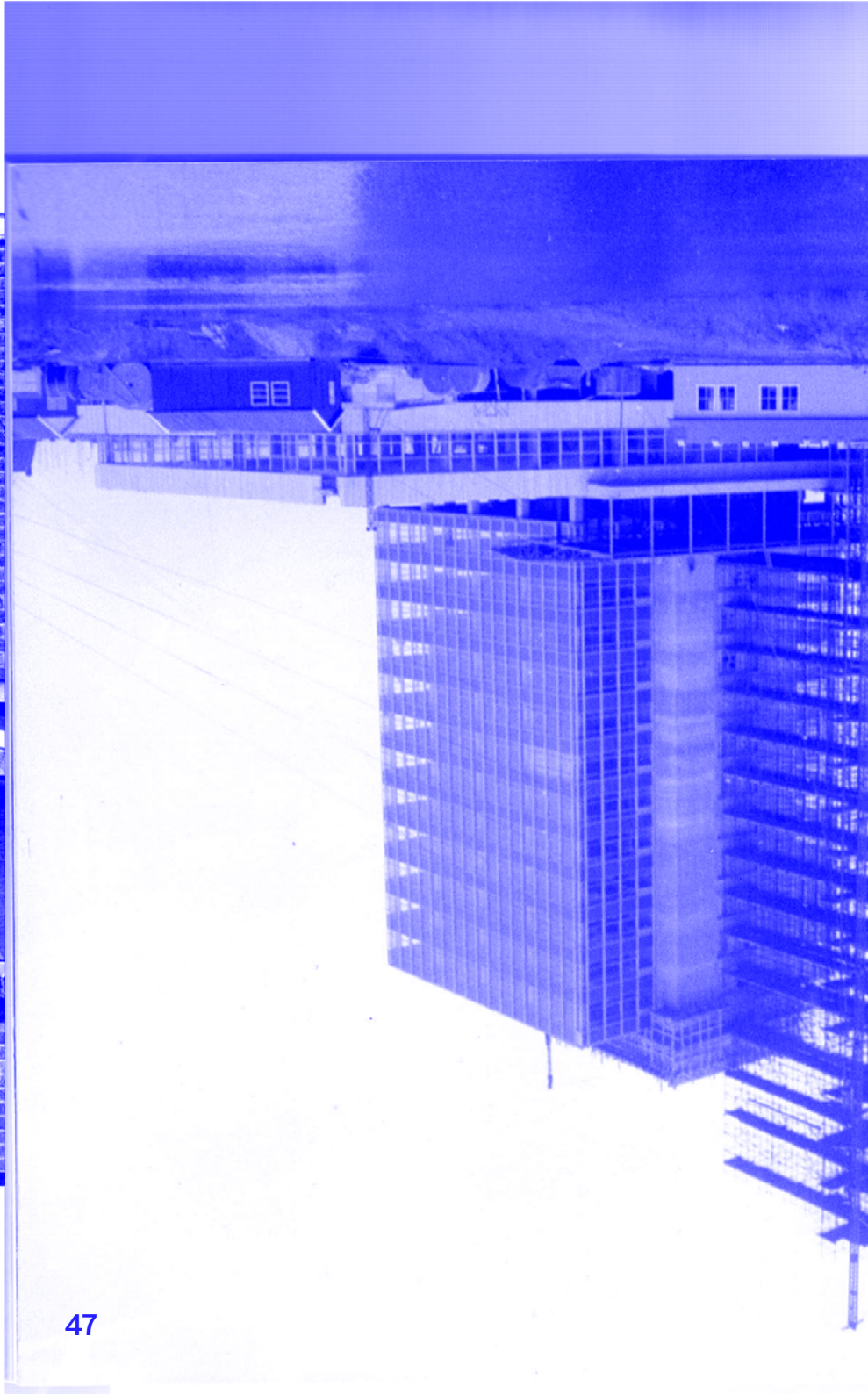
Digital reconstruction using the Mobscan images

Mobscan is a happening that seeks to explore togetherness in the immediate physical present. A group of people stand in a circle taking photos of one another, collectively acting out the algorithmic requirement of a photogrammetry scan. Spectators, who often populate the backgrounds of our everyday photos become active performers. The scan creates new opportunities for interacting with seemingly complex and out of reach technologies and the gathering becomes a space for reflective thinking. By defamiliarising our assumed interactions with our smartphones, audiences are invited to imagine a more active role in engaging with our everyday technology. Here design is used as a methodology to look at the world rather than simply a means to an end.

We form a circle with each person facing another.
We take out our smartphones from our pockets and aim them at the person opposite.
We take three photos: one crouching, one standing normally, one with our arm outstretched as high as possible.
We collect the images and using open-source photogrammetry software we knit the images together. Our moment of togetherness is reconstructed in the virtual world.
Why bother?

First public Mobscan in Septemberplein, Eindhoven


7000
Woning-
Zoekende
protest
187



OMP 161
Eindhoven
Footnotes:
Tales from a
Technocratic
City

Published by:
Onomatopee, 2019

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Made possible thanks to the generous support of:

creative industries fund NL

Provincie Noord-Brabant

cultuur eindhoven

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Eindhoven Student Housing Protest
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Leon Huets
Miodrag Kuč
Moniek Drisse
Noud Sleumer
Paolo Patelli
RaRaRadio
Richard Ponjee
Rutger Schimmel
Siem Nozza
TU / Eindhoven
Łukasz Trzciński

Special thanks to:

Timothy Donaldson for granting us permission to use DonaldsansCODE in its beta form. This humanist monospaced typeface represents an alternative relationship towards technology in the context of the 'smart' city. His fonts are available through <*www.timothydonaldson.org*>.

Yorit Kluitman for supplying additional graphic resources and elements of the visual identity.

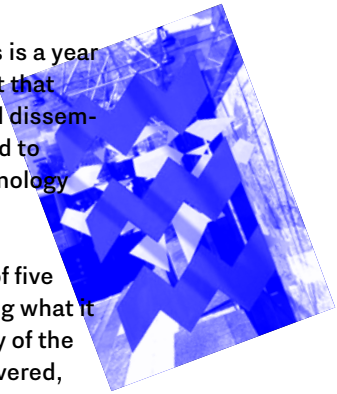
Eindhoven Picture Archives for supplying the postcards featured throughout this publication.

Everyone who turned up to the meetings and supported Footnotes with time and labour.

Typefaces:
DonaldsansCODE
Nitti Grotesk

Endnote:
The CityBeacons which feature heavily in this zine have, at the time of publication, all of their sensors switched off. This is because of Dutch security laws. It does not however mean that their sensors will not be switched on in the future. They are emblematic of the presence of technology in Eindhoven. They are totems to a system and economy we collectively don't quite understand yet. So while they're focused on in this publication, they represent the myriad of sensor technologies that private companies and governments place in *our* public space.

Eindhoven Footnotes is a year long research project that means to engage and disseminate research related to the presence of technology in our smart city.



This zine is the first of five publications exploring what it means to live in a city of the future. The topics covered, while local, tie into the wider global debate surrounding big data and citizenship.

From branding to surveillance, this zine analyses the rhetorics behind the people and companies shaping the urban environment of Eindhoven.

ONO
MATO
PEE

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