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The New World [R]evolution: Surveillance Capitalism and Cities

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Surveillance capitalism commandeered the wonders of the digital world to meet our needs for an effective life, promising the magic of unlimited information to anticipate our needs and ease the complexities of our harried lives. Under this new regime, our lives plundered for behavioural data for the sake of others gain. In the absence of a decisive societal response that constrains this logic of accumulation, surveillance capitalism appears to become the dominant form of capitalism of our time. Even though the rapid growth of technology is the key for effective lifestyle, it also offers an ever-restraining means for freedom. This thesis describes an emergent logic of accumulation; Surveillance Capitalism in the networked sphere through the advanced technological revolution and considers its implication for the present-day living society and has became more evident during this pandemic crisis. The institutionalising practices and operational assumptions of tech-corporations, mainly Google Inc., are the primary lens for this research. An examination of the nature of surveillance, capitalism, technology, and urban domain intends to shed light on the implicit logic of surveillance capitalism through surveillance and computational logic to the built environments

Keywords: Surveillance Capitalism, Digital, Architectural Criticism, Urbanism, Built Environment

INTRODUCTION

This thesis seeks to understand, apprehend, and grasp the implication of digital capitalism and the form of surveillance in and around architecture in the creation and marketing of cities. Surveillance capitalism unilaterally claims human experience as free raw material for translation into behavioural data fed into advanced manufacturing processes into prediction products traded in new marketplaces for behavioural predictions. (Zuboff, 2019) Surveillance capitalism runs in contrary to early digital dreams. It revives Karl Marx's old image of capitalism as a vampire that feeds on labour, but instead of labour, Surveillance capitalism feeds on human's experience. As the concept of Smart Cities is gaining attention in city developments to stimulate economic growth and quality of life. Sensor developers and Tech-companies are continually developing applications and devices to enhance the city's real-time decision-making abilities. (Batty, 2013)

The architecture of Jeremy Bentham's 18th Century conception of the Panopticon had introduced the idea of being watched without the knowledge of when and who led to a sense of constant fear, suspicion, and control over one's behaviour. (Goss, 2010) Surveillance, control, technology, and economy share close ties to one another, and architecture to the modern city today in the rise of new economic power. Inconceivable and impossible in the past, only now it is viable for a surveillance network to exist across the entire city or nation since the inception of the digital revolution. (Laidler, 2008) The transition from the use of surveillance as government assurance to create a safer and secure environment to commercial ends has led to the need for re-evaluation.

A new breed of economic power had filled in the void of every casual search, like and click became an asset to be tracked and monetised by companies. Since 2001, companies began to explain these violations, such as privacy as the necessary exchange got "free" internet services. Surveillance capitalism took over the wonders of the digital realm to meet our needs for an effective life, promising the magic of unlimited information and ways to anticipate our needs and ease the complexities of our distressed lives.

Almost all aspects of life are monitored and stored in the Big Cloud. People are willing to trade their personal information and surveillance of their shopping habit in return for ease of access and benefits the providers offers. (Orange, M., 2019) The fourth Industrial revolution has enabled the growth of many tech companies and corporations to a global scale with revenues that could match or even exceed the wealth of certain countries. As the world is moving forward to cyber-physical future and the change of pattern in living becoming more dependent on the cyberspace, we are unconsciously accepting the idea of a new intrumentarian power that asserts dominance over society.

THE THIRD MODERNITY

1.The Fourth Industrial Revolution

Industry 4.0 was first coined at the Hannover Fair in 2011 on describing the organisational revolutionisation of global value chains. (Schwab, 2018) Industry 4.0 is a technological revolution that builds on the digital revolution and appears to become more sophisticated and integrated as a result, could transform societies and the global economy. This revolution creates a world where the virtual and physical systems of manufacturing global cooperate in a flexible way enabling customisation of products and the creation of new operating models. This revolution appears to be a double-edged sword as it will generate great benefits and imposes bigger challenges in equal measure. Schwab suggests that the great beneficiaries of the fourth industrial revolution would be the providers of intellectuals and capitals.

As technologies are rapidly advancing and are transforming the entire structure of world economy, communities, and human identities while countries and major powers are experiencing the devolution of power, starting from the UK leaving the European Union, and the call for Scottish Independence. The fourth industrial revolution is evolving and emerging in ways that are creating new challenges and concerns for the world at the time when the concerns on social inequality, tensions and defragmentation of political power are rising. (Schwab,2016)

2. The Big Switch

We are living in exciting times of fundamental technological change. The scope and pace of groundbreaking scientific and technological advances are breathtaking. These rapid advances in technology became the enabler to our lives in shaping the way we live, work and connect. The "science fiction" of yesterday are becoming a reality in new products and services that we are now impossible to live without it. (Schwab, 2019) We are at the beginning of a revolution that is fundamentally changing the way we live, work and relate with one another. In its scale, scope and complexity, Schwab considered it to be the fourth industrial revolution that is unlike anything humankind has experienced before.

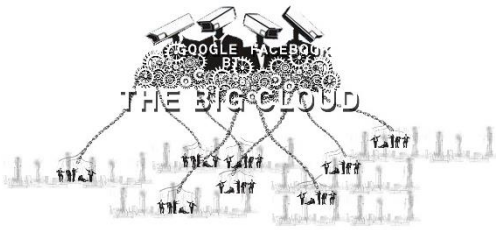


Figure 1 Control the Cloud control the World. (YL. Law, 2019)

The Velocity, Breadth and Depth and Systems Impact of this big switch underpin Klaus Schwab's conviction that a fourth and distinct revolution is underway. In contrary to the previous industrial revolutions, this switch is evolving at an exponential pace; a result of the multifaceted and deeply interconnected world that we are living. This switch builds on the digital revolution and combines multiple technologies in extreme complexity that are leading to unprecedented paradigm shifts in the economy, businesses, society, and individuals. (Schwab, 2019) It involves the transformation of the existing systems, across and within countries, companies, industries, and society.

3. Progress and Harmony for Mankind

The 1970s was an exciting period for architects and visionaries for future designs and innovative building technologies optimistic of the future world. The theme of Osaka World Expo 1790 "Progress and Harmony for Mankind" was a showcase of possibilities of modern technology to create a foundation for a quality of life and peace throughout the world.

Technology, the enabler of future society. "Progress and Harmony of Mankind" was the first world's fair held in an Asian country. The integration of advanced technology of the time, immersive multi-media and bold futuristic architecture has projected Japan as a simulation-site for a future society. (O. Gardner 2011) Many of the visions of the future offered by the expo pavilions were fundamentally utopian, from the convenient ultra-modern lifestyles promoted by Sanyo and Takara pavillions to the promise of technological advancement offered by the electronics and communications display. The Expo was a celebration of a vision of the future city as a place of social management through the integration of spatial design and computerised systems that monitors and manage society and controls interpersonal exchanges. (O. Gardner 2011) It was meant to be a "science fiction" of the future

city as a bureaucratically managed "information society."

Expo'70 marks an important phenomenon in the history of architecture and technology. This expo promoted as the celebration of an achievable urban utopia, driven forward by technology and invention of time before the internet is ubiquitous.

The main bridges between the digital and physical applications that was enabled by the fourth industrial revolution are the discovery of the Internet of Things (IoT). The relationship between services, products, places and people that are made possible by connected technologies and digital platforms. (Schwab, 2018) Sensors and other means of connecting instruments in the physical world to digital networks are proliferating at an astounding pace. From the earliest inventions of computers, smartphones, tablets to mind-reading implants and the numbers of serious innovations are expected to increase dramatically in the future.

These innovations will radically alter the way the world systems operate. Technology-enabled platforms such as Uber, Airbnb, Facebook, and Google have made possible of the on-demand economy. These platforms were made easy to access with the use of smartphones and tablets, creating entirely new ways of consuming goods and services. (Schwab, 2018) The Uber model platform incorporates the disruptive power of these technological platforms. These platform businesses are rapidly multiplying to offer new services ranging from chores to parking, from homestays to sharing rides.

4. The Instrumentarian Power for certainty.

The visionary of ubiquitous computing, Mark Weiser, foresaw the immensity of instrumentarian power as a totalising societal project. Weiser sensed the foundation of an unprecedented power that can reshape society in unprecedented ways. (Zuboff, 2019) On the mission for totality, surveillance capitalists enlarge their scope from the "digital vacuum" to the physical world, rendering all people, things and processes as computational objects. Instrumentarianism seeks totality as a condition of market dominance and relies upon its control over the division of learning in society, enabled and enforced by Big Other. (Zuboff, 2019)

The instrumentarian future integrates this symbiotic vision in which the mechanic world and social world operates in harmony in and across "species" as humans emulate the superior learning process of the smart machine. We learn to sacrifice our freedom to collective knowledge imposed for the pursuit of certainty. An irresistible offer by surveillance capital as its answer for our quest for effective lives.

5. Instrumentarian and Totalitarian

Totalitarian seeks totality as political conditioning as Instrumentarian seeks totality as a condition to modify, predict, monetise and control over the consumer market. Instrumentarianism is as startling, in-comprehensible and to new human history as totalitarianism was to its witnesses and victims.

This power operates from the point to reduce human persons to the mere animal condition of behaviour shorn of reflective meaning. Arendt anticipated the destructive potential of behaviourism when she lamented the devolution of our conception of "thoughts" to something that is accomplished by a "brain" to electronic instruments. Big-data companies present the future as a new era of transparency and freedom. The endpoint of information capitalism is a social order that can only be described as totalitarian.

SURVEILLANCE AND CAPITALISM

"If it is free, then you are the product." – Andrew Lewis, 2010

Surveillance Capitalism is claims of human experience as free raw material for translation into behavioural data. Some of the data used for the betterment of product or services as some declared as proprietary behavioural surplus. The behavioural surplus feeds into advanced manufacturing processes known as Artificial intelligence. These data translate into predictive products, traded in new kind of marketplace for behavioural predictions which Shoshana Zuboff called; "behavioural futures markets." (Zuboff, 2015)

John Bellamy Foster and Robert W. McChesney first introduced the term Surveillance Capitalism in 2014. The concept had reached a wider audience through the work of Shoshana Zuboff. In definition, Surveillance Capitalism is a new economic order that claims human experience as free material for hidden commercial practices of extraction, prediction and sales. An economic logic which the production of goods and services subordinated to a new global architecture of behavioural modifications. (Wigmore and Rouse, 2018) An evolved capitalism marked by the concentration of wealth, knowledge and power that are unprecedented in human history. It is a movement that aims to impose a new collective order based on total certainty, laying the foundational framework of a surveillance economy.

Consumer surveillance is commonly used for targeted marketing and advertising. Marketers

combine demographic information with data about people's online activities to focus on marketing efforts where they are most likely to meet success. (Wigmore and Rouse, 2018) Surveillance capitalism runs in contrary to early digital dreams. Instead of being "connected", pro-social, innately inclusive and naturally tending towards the democratisation of knowledge, such digital connection has become a means of others' commercial gains. It revives Karl Marx's old image of capitalism as a vampire that feeds on labour. Instead of labour, surveillance capitalism feeds on every aspect of the human's experience. (Zuboff, 2015)

Today's prediction products trade in behavioural futures markets that extend beyond targeted online ads to many other sectors, including insurance, retail, finance, goods and services companies determined to participate in this new market. Users became the sources of surveillance capitalism's significant surplus, the object of a technologically advanced and inescapable raw-material extraction operation for the enterprises that trade in its markets for future behaviour. (Zuboff, 2015, Oremus, 2018)

1. Birth of Surveillance Capitalism

"Mass production begins in the perception of a public need." Henry Ford (Orange, 2019)

Capitalism evolves in response to the need of people in a time and place. Ford stood alone in his recognition of a nation of newly modernising individuals, who had little and wanted much at a price they could afford when at a time the Detroit automobile industries were preoccupied with luxury vehicles. The demand for affordable automotive had allowed Ford to discover the transformative power of a new logic of standardised, high- volume, low-unit cost production. In paying the assembly-line workers higher wages than before, the Ford industry thrived building on top of the thriving population of mass consumers. (Encyclopaedia Britannica, 2016) Populations of newly modernising individuals became the essential sources of customer and employees, leading to a range of institutionalised reciprocities. Fordism had a durable employment system, career ladders and steady increase of wages and benefits which sustained the company's growth for the last forty years. Emile Durkheim identified the everlasting human quest to live effectively in the "conditions of existence" as the causal power that calls for the existence of divisions of labour, technologies, work organisation, capitalism, and civilisation.

"if work becomes more divided, it is because the struggle for existence is more acute."
(Merton, Robert K, 1934)

The rationality of capitalism reflects this alignment, with the needs that people experience as they try to live productively, struggling with the conditions of existence that they encounter in their time and place. The First Modernity has brought a new mentality to life for "Second Modernity," a modern migration from traditional lifeways bloomed into a new society of people born to a sense of psychological individuality, a double-edge birthright of liberation and necessity. (Zuboff, 2015) If Ford was known as the First Modernity, Apple, Google and Facebook are the enabler of Second Modernity, where it produces an inversion of thoughts of first modernity as it emerges a new society of individuals that was complimented with wealth of life fundamentals which subsequently propels human civilisation to a Third Modernity where surveillance capitalism becomes the enabler.

Industrialisation and practices of mass production capitalism had produced more wealth that could ever imagine politics, distributional policies, access to education and health care. Hundreds of millions of people had the privilege to access the experiences that had once only the tiny elite groups had. The Hierarchical social compact and mass society of the first modernity promised predictable rewards propelled humanity towards a more intricate life. Communication, information, consumption, and travel stimulated individual self-consciousness and imaginative capabilities and informed perspectives and values in ways that could no longer be contained by predefined roles in the society. (Zuboff, 2015) The new sense of psychological power and its demand had summoned the internet and burgeoning information into our everyday lives. We now live in this collision between a centuries-old story of modernisation and economic violence that thwarts our pursuit of effective life, claimed Zuboff. The condition of such existence had called upon for the "digital marvels" and surveillance capitalism's subsequent gestation and growth. (Flew, 2012)

2. The New Economic Mutation

New companies such as Google and Facebook appeared to bring promises of inversion to life in new domains of critical importance, rescuing information and people from the confinement of old institution, enable us to search the information of the world and connect with people around the world. (Zuboff, 2015) Such promises became the core for commercial digital businesses, from iPhones to on-demand services online, apps, devices and most recently cities. Surveillance Capitalism is an economic mutation of old and new reconfigurations in an unusual pattern. Joseph Schumpeter regarded this form of capitalism as an "evolutionary" process as the belief of digital innovation quickly turn to the language of disruption and an obsession with speed

where its campaign conducted under the flag of "creative destruction." Schumpeter insisted that this evolutionary process is triggered by new consumer needs, and alignment with those who need is the discipline that drives sustainable mutation. (Schumpeter, 1976)

"The Capitalist process, not by coincidence but by its mechanism, progressively raises the standard of life of the masses." – Joseph Schumpeter.

A new breed of economic power had filled in the void of every casual search, like and click became an asset to be tracked and monetised by companies. Since 2001, companies began to explain these violations, such as privacy as the necessary exchange got "free" internet services. Surveillance capitalism took over the wonders of the digital realm to meet our needs for an effective life, promising the magic of unlimited information and ways to anticipate our needs and ease the complexities of our distressed lives.

3. Google, capitalising on data waste.

Figure 2Human for raw materials. (YL.Law, KJ.Sha, 2019)

Google became the modern-day capitalist model of Ford, and General Motors were to mass-production-based managerial capitalism. Google became the pioneer in the discovery of behavioural surplus. At the early stages of Google, the company embodied the promise of information capitalism as a liberating and democratic social force that galvanises the second modernity populations around the world. Google had successfully imposed computer mediation on broad new domains of human behaviour as more people searched online and engaged with the web through Google Search services and data was informated for the first time. These behavioural by-products were stored and operationally ignored before it was discovered to ave significant insights of personal information that could provide a "broad sensor of human behaviour" claimed Larry Page.

What regards as "data exhaust" erupted into Google's servers during Search was reimagined as critical elements in transforming Google Search Engine into a spontaneous process of continuous learning and improvement- A.I Learning. (Levy, 2014) During the early period, these behavioural data were provided at no cost, rendered, and reinvested in the user experience in the form of service enhancement at no cost to users. The user and service provider creates a cycle, where users provide the raw material in the form of behavioural data in return for improvement of the product or service.

4. Turning Surveillance into Profit

Industrial capitalism transformed nature's raw materials into commodities and surveillance capitalism lays its claims of stuff human nature for a new commodity invention. (Zuboff, 2016) The discovery of behavioural surplus marked a critical turning point in the history of Capitalism. Surveillance became the path to profit that overrides "we the people," taking our decision rights without permission. (Valliere and Peterson, 2007) The behavioural surplus was the core of Google's success. In 2016, 89% of the revenue of its parent company, Alphabet Inc. was derived from Google's targeted advertising programs. (Sec.gov, 2015) As Benninger explains, "information processing and flows need themselves to be controlled, so that informational technologies continue to be applied at higher and higher levels of control."

The translation of behavioural surplus has enabled Google to create revenue at zero marginal cost derived from user's non-market online behaviour. The corporation aggressively hunts and simultaneously create new kinds of a marketplace which its proprietary prediction products to be bought and sold. Google has been expanding its territories beyond digital space. We are witnessing the ventures of Google towards cities where two-third of the population lives in and continuously innovate on devices to expand and extract behavioural information out of the society effectively.

BIG BROTHER AND THE BUILT ENVIRONMENT

Figure 3The Chinese Social Credit System. (YL. Law, 2019)

Surveillance is commonly associated with coherent terms and trends such as crime prevention, discipline, and punishment. Today we witness a shift from imposed to voluntary surveillance in exchange for promises of convenience. (Cetnarski et al., 2019) The city today is highly dependent on the mechanism of every action being seen and recorded. Society approaches the Ultimate level of data precision. It is an era of nearly perfect knowledge; the depth of human understanding of the world covers the spectrum from a map of the universe to individual genetics. Everything that exists is recorded, registered, stored, and transformed into tradable information. While the exposure of personal data contributes to the convenience of life and ability to proceed with little to no effort, it makes citizens easy targets for control and manipulation.

"Speed cameras, CCTV, videophones- even spy satellites and roving TV crews- are all part of today's urban experience" (Fairs, 1998)

It began with a dream of a connected world, space where everyone could share experiences and feel less alone. It was not long before this world became matchmakers, instant fact-checker, personal entertainer, and guardians of memories. Digital traces are a- trillion- dollar- a- year industries where everyone is commodities to the tech companies. All of the interactions online, credit card swipes, locations and likes are collected in real-time and attached to individuals and given to any buyer's access to everyone's emotional pulse. (The Great Hack, 2019) The digital realm has become a tool for capitalism and an instrument for the totalitarian regime. Digital traces/ behavioural data are today's most valuable asset surpassing the oil value. The control of this information is key to today's world.

From being a centralised instrument of control, surveillance imperceptibly became an inherent part of our daily lives. The crawling revolution of the last decade brought us millions of cameras and billions of sensors. We carelessly revealed terabytes of our sensitive data to the world. The market of the new surveillance based on exposure has already surpassed the market of traditionally understood vigilance and supervision. Google is seen to be the supreme leader in this spectrum. With Google in the lead for surveillance capitalism, it has rapidly become the default model of information capitalism on the web and gradually drew competitors from other sectors. (Zuboff, 2019) The scale of raw- materials flow reflects Google's domination of the internet, of more than 3.5 billion searches per day and 1.2 trillion searches per year worldwide in 2017. (M. Schoen, L. Dingle and Kendall, 2011)

At first, raw materials were found, simply as a by-product of a user's search actions. Later these assets were harvested aggressively and procured through means of surveillance. These corporations simultaneously created new kind of marketplace in which its proprietary "predicative products" manufactured from these raw materials could be bought and sold. (Zuboff, 2018) As these once 'niche' market is starting to attract more competitions. "Good quality" raw materials are harder to mine in order to continuously improve and produce more accurate "predicative products", Google and other tech giants began to expand its search into the physical space such as the cities for a more accurate behavioural surplus to remain the company's dominance and validity.

According to the United Nations, 68% of the world population is projected to live in urban areas by 2050. The world is projected to have 43 megacities with more than 10 million inhabitants by 2030. The urban population of the world has grown rapidly from 751 million in 1950 to 4.2 billion in 2018. (UN DESA | United Nations Department of Economic and Social Affairs, 2018) The economic model of the tech giants to expand and invest in new cities and cities that offers control to the company seems to be a legitimate economic move for the company. New cities are prime selections as legislation and mining are much easier than existing cities. Instead of investing in private labs where tech companies run tests based on the speculative assumption, cities became the 'Petri dish' for experiments offering real-time data feedback. The process of manufacture and innovation could be shortened and carried out more effectively. Metaphorically speaking, cities would eventually

become human factories for the companies to "mine" and continuously manufacture products out to the market at less than a fraction of cost.

"Clearly cities are the key to whether we successfully meet this massive transition challenge and achieve growth that is both sustainable and inclusive. Also, the critical enabler is going to be technology."
(Bélissent 2010, 2)

1.Human as Natural Resources

Figure 4City as Human Factory. (YL.Law, KJ.Sha, 2019)

The trend of such revolution is clear; private information will transform into forms of raw material, becoming a form of trade to anyone interested. We are in an exciting yet confusing transition period; the opportunities in this new world are seductive yet terrifying. The optimist pictured a scenario, which technologies help organise our time and space more efficiently, new software helps us be more effective in managing our money and new tools of communication connect and organises us better as a community. The pessimist paints the new world where there is no place for intimacy, secrets and room for mistake. Every mistake from the past can be used against us at any moment of the future. The global corporations, governments and organisations hold every information of us in return for a promise of convenience. Larry Page's vision has perfectly reflected the history of capitalism, marked by taking things that live outside the market sphere and declaring their new life as market commodities. (Naughton, 2019)

Human experience was the discovery from Google achieving a breakthrough as a business. It could be extracted at no extra cost online and at very low cost out in the physical world. (Naughton, 2019) Once extracted, it is rendered as behavioural data, producing a surplus that forms the basis of a new class of market exchange.

As internet use went mobile with the rise of smartphones and tablet, Google's business model evolved to defend and expand its primary supply chain in Search through Google Android's mobile platform. (Barr, 2015) In 2008, Google led an alliance of technology manufacturers and wireless operators to develop an "open and comprehensive platform for mobile devices." Instead of competing with Apple for the lucrative margins on smartphones, Google grasped the even greater potential growth of profit through behavioural surplus and its fabrication as prediction products. 77.45% of the world's smartphones or any other electronic devices were powered by Android. (Casserly, 2019)

Google licensed Android to mobile manufacturers for free because it was intended to draw users into Google Search and other Google service, establishing a ubiquitous mobile supply to sustain known terrains of behavioural surplus and opening new unchartered territories such as geolocations and mobile payment systems that are highly coveted by advertisers. (Barr, 2015) Unlike the iPhone, the Android platform was open source which made it easy for applications developers to create apps for users. Manufacturers who wanted to preinstall Google Play into their devices were required to license and install Google's default apps: Search, Gmail, Google Play, YouTube etc whichever supply routes happen to be in ascendance at the time. (Zuboff, 2017)

2.Birth of New Urban Form

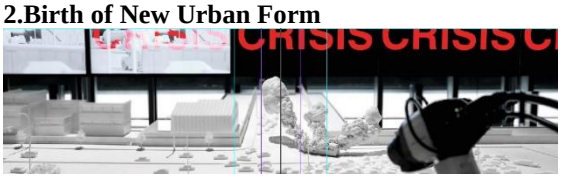


Figure 5Control Syntax Songdo Exhibition by Mark Wasiuta & Farzin Lotfi-Jam (Control Syntax Songdo - Seoul Biennale of Architecture and Urbanism 2017)

The same model of development, the implementation of surveillance in the city of Songdo were easier than Sidewalk Toronto. In the west, ubiquitous computing is a controversial idea that raises privacy concerns. (O'Connell, 2005) Townsend suggests that there is a historical expectation of less privacy in Korea or most Asian cities; social and regulatory obstacles are fewer in

comparison to the west. Thus, such experiments are easier to execute in Asia than in the west. Korea is willing to put off the hard questions to take an early lead and set standards for other cities to follow. (O'Connell, 2005) Songdo City is a new breed of urban form emerged amid the storm of global crisis such as climate change, energy transition, demographic shifts, food and water insecurity, pandemics, economic stress and ecological degradation. (Kuecker,2007)

Most importantly, the shift of capitalism to surveillance capitalism. Better known as "ubiquitous city", this urban form emerged by the growth of computer technologies that promised to enhance efficiencies within the urban metabolism. Songdo City was born part of the mission of transnational corporation's means for an economic shift from technologies to cities.

Gale International offers the perfect partnership with South Korea. For over half a century, the country's economy has been relying on exports and known for its hi-tech industry. During the economic crisis in 2007 and 2008, the government launched a stimulus package aimed at developing the country's infrastructure with an emphasis on green investment. Gale International offered to invest and develop Songdo City, a district built from the reclaimed island, in return with tax breaks and autonomy control over 'technologies and products. Gale International and POSCO E&C set up a joint venture dedicated to the Songdo City project with a 70% majority share by Gale International. Development right exclusivity and government subsidies in the form of discounted land sales were part of the agreement in the attraction of foreign direct investment into South Korea. (Hyun, 2017) It has provided opportunities to the corporation to invest and test on technologies that have yet debuted in conventional cities such as smart rubbish disposal system and infrastructures containing sensors to track and monitor usage. Eventually, the city has become a living laboratory for Gale International to test and develop "products' for the corporation. The urbanisation of Songdo city, like many new cities, is on steroid. The ambition to create instant urbanisation, the corporation invested heavily on top-quality international education centres to entice a diverse international community. The young population had voluntarily flocked into the city looking for a better lifestyle. (Lobo, 2014) A capitalist strategy was drawing instant capital return and wealth return. With every inch of land and infrastructure technically owned by the Gale international, citizens inside are surveilled and converted behavioural information into capital for the corporation.

The data-intensive scientific development has materialised because of the advances in data science systems, processes and methods underpinning technologies are instigating a drastic shift in cities. The data analytics possesses the ability to recognise urgent and common problems and solutions to avoid wasting of resources and time by reinventing the wheel when considering new projects associated with data analytics to the optimisation of existing urban domains. Urban data covering different information on citizens, transactions, movements, observations are often collected and stored for purposes unrelated to the current urban problems.

There are many municipal governments around have started to release various kinds of administrative and operational data through such channels. In the context of Songdo City, a systematic framework for urban analytics places a structure on the problems of urban sustainability. (Bibri,2018) In the case of Songdo City, the analytical data frameworks aimed to help extract computationally complex activity, behaviour, process, and environment to identify and gain predictive and descriptive insights into new structures and systems to increase their goals of environmentally sustainable development and stable state of consumerism through enhancing the urban intelligence function for decision-making.

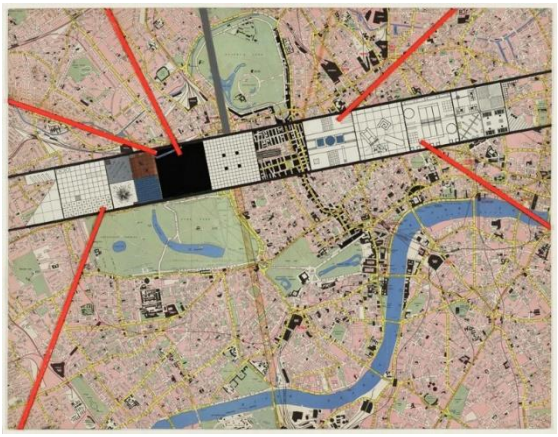
3.Doublespeak

Under the surveillance capitalism regime, the first text trails a shadow close behind. The first text is full of promises functioning as the supply operation for the second text; the shadow text. Everything that contributed to the first text becomes a target for surplus extraction, which was hidden from our view and prone to be read by the surveillance capitalist. (Zittrain et al., 2008) In this context, Zuboff argued that our daily life experiences are harvested as raw material to be accumulated and analysed as a means to other's market ends. The shadow text is a burgeoning accumulation of behavioural surplus, and it analyses the public, and it is seemingly to be increasingly difficult or impossible to refrain from contributing to the shadow text. It feeds on our experiences as we engage in the reasonable and necessary routines of social participation.

The surveillance capitalist learns from their shadow text to shape public text to their interest. There have been a countless revelation of Google and Facebook's manipulation of the information that we see through sponsored posts from Facebook and Google-powered ads through algorithms derived from surplus, select, order and manipulate its News Feeds to each corporation's commercial or political objectives. The ability of surveillance capitalism to corrupt and control with its "doublespeak" produces unprecedented asymmetries of knowledge and

power that operate which would enable it to impose substantial control over the division of learning outside of our awareness.

4.Smart Cities modern-day resemblance of Koolhaas' Exodus



The Voluntary Prisoner of Smart Cities

Like the wall accentuated in Rem Koolhaas' 1972 thesis design. Exodus proposes a walled city in one long strip, with tall barriers that cut through London's urban fabric, it was said to be an intervention design to create a new urban culture invigorated by architectural innovations and political subversion. A restricted enclave encircled by a forbidding wall, a prison on the scale of a metropolis where people sought refuge voluntarily. (Koolhaas and Mau, 1998)

Smart Cities today are very much a resemblance of modern day's Exodus. Instead of a forbidding wall that cuts through the existing urban fabric, most smart cities created cities of their own, functioning parallel but isolated with the existing fabric. Very much like Exodus described, smart cities establish an architectural oasis in the behavioural sink of parts of cities; luring people into smart cities like voluntary prisoners of intense metropolitan desirabilities.

The Institute of Biological Transaction was divided into four parts by a cruciform building. Each part completes with modern healing of capacity to heal and render one's physical and mental state. (Koolhaas and Mau, 1998) The Institute of Biological Transaction resembles the modern days' Internet of Things, as the institute sustains the Voluntary Prisoners through biological emergencies and physical and mental crises. Smart cities have internet kiosks, surveillance technologies and artificial intelligence in every part of the city, including housing blocks to render and sustain the crises of its settlers.

Smart cities today build on exclusivity, inequality, aggression, and destructions, rendering a new phenomenon of architecture warfare against undesirable conditions of the existing cities. It became part of the tool for surveillance capitalist manifesto. Antoine Picon, professor of the architecture of Harvard's Graduate School of Design, suggests in "Learning from Utopia" that Exodus exhibits utopian engagement

CONCLUSION

We are standing at a threshold in an exciting advanced technological future. Big data analytics and data-driven decision-making and related processes, systems and methods that will be of massive use in and effectively interwoven in the city fabric.

Surveillance capitalism departs from the history of market capitalism in three startling ways. First, it insists on the privilege of unfettered freedom and knowledge. Second, it abandons long-standing organic reciprocities with people. Third, the spectre of life in the hive betrays a collectivist societal vision sustained by radical indifference and its material expression of Big Data. Surveillance capitalists are just like other capitalists in demanding freedom from any form of constraints. They constantly explore unchartered territories to commodify raw materials or area less explored.

The notion of ignorance and freedom are core characteristics of capitalism rooted in conditions of life before the advent of modern systems of digital networks. Surveillance became key towards a new breed of economic power. In fact, Karl Marx saw surveillance as a fundamental aspect of the capitalist economy and the modern nation-state. Understanding surveillance as both an economic and political concept. (Fuchs, 2012) Surveillance became a technological framework for control, discipline, and also a political process of domination, which included a potential for counter-surveillance through the press. (Galic, Timan and Koops, 2015) This new type of capitalism is said to have hijacked by surveillance which now formed a wholly new logic fitting a networked world, aimed to predict and modify human behaviour as means to produce revenue and market control. (Zuboff, 2015)

Data mining and big data have become the foundational components of this new economic logic which is based on prediction and its monetisation- selling access to the real-time flow of the people's daily life to influence directly and modify their behaviour for profit. The pervasive and ubiquitous recording of the daily transaction also means that the market is no longer unknowable as it still is in classical liberalism rather than becoming transparent and knowable in new ways. (Zuboff, 2015, Varian 2014)

"There is a limit on the level of surveillance that democracy can co-exist with, and we are far above that." Richard Stallman, 2013

Cities are a fertile breeding ground for "raw material" minings. In a world where such a system of contractual monitoring and enforcement, city dwellers are saturated with data and are produce radically distributed opportunities for observation, interpretation, prediction and mitigation of the totality action. A new architecture is formed where there is no escape, making the Panopticon seem prosaic. (Zuboff, 2015, Varian 2014)

Perhaps the current society is not made aware yet, or the general population are not concerned to be commodified in return for the privilege of ease. The path towards a life under the watch of tech giants is inevitable. Our connections to the digital world have become so deep-rooted that it is impossible to imagine living in a world without Google Search and Facebook. Thus, raising a question to this phenomenon, are our privacy that important anymore? The way forward in embracing the technologies driving the fourth industrial revolution that will fundamentally transform the structure of the economic world, communities and humanity that largely revolves around automation, totality and surveillance, it seems personal privacy may be the trade-off for freedom in the ultra-connected world.

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