The relationship between Life and Architecture…

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Content

Introduction

If you never sleep, you are never awake.

How to reach harmony in the urban environment today after separation and misconceptions?

The story is about duality (existence) between microorganisms (bacteria) and spaces, how do we attribute dirt and cleanliness in our modern lives based on how do we see them? Perhaps I'm not aware of how much our environment influences us; the country we are born in, the city we live in, the neighborhoods and the house we walk into every day, the bed we sleep. All of these create a single organism that works in harmony, forming a living urban ecosystem, called the urban environment.

The bed is an example of a microcosm that encloses these dualities, ambiguities, harmonies, misconceptions and microbes.

The bed (bedroom) is an example to look in a small-scale perspective, the meaning is connected/created by our own feelings and emotions, and where we face challenges of the culture of sleep, how we recognize and struggle to recognize its architecture. Where we become sleep deprived or sleepless even when we sleep in "bed" or, in fact, we are categorically sleeping all the time due to the influence and effect of capitalism, consumerism and technology, leaving no room for real quality sleep or free/quiet time in general —— how the most micro part of an organism can already say so much about much bigger facts and ideologies about our entire societies.

We live in the ERA of re-charging yourself/your devices —— What is the space where we recharge? —— therefore there is a shift in how to identify harmony within the urban environment. To make it visible I followed examples and research of microbes, micro-organisms and co-existence of non-human individuals in relation with the power of architecture and the arts. To look for a space of coexistences and the indistinct boundaries between public and private spaces, work and play, rest and action. —— Is there a shift? Are they all merged? ——-

Bacterias and Micro-Organisms

I grew up in a city and fortunately on weekends and holidays I would go to the countryside, however my usual surroundings were often metropolis. This is the lifestyle I grew up in, always being surrounded by people, huge traffic jams, artificial lights everywhere, the feeling of living in the big apple. Being born, raised and educated in an urban environment wasn't exactly what I wanted, but it was mostly what I experienced.

For example, artificial light at night (ALAN) is one of the anthropogenic disturbances to urban ecosystems in the Anthropocene. ALAN illuminates more than a quarter of the land surface, and is still spreading rapidly across the globe at an estimated rate of 6% per year. ALAN harms individual organisms living in the urban soil, and restricts/disturbs their interspecies interaction. ALAN is known to cause plenty of environmental impacts on physiology and ecological communities including reducing populations of *aphid* (the base of many food chains in plantation and gardens) and advancing reproductive time of birds, leading to earlier spring greening of trees.This influence phytobiome[1] through direct and indirect effects. *Bacteria receive more organic carbon, including sugars, and metabolize them faster when exposed to light. In the dark those functions are reduced, and the bacteria increase protein production and repair, making and fixing the machinery needed to grow and divide, similar to us, humans.*[2]

I'm in a place where nobody knows me, even though I'm totally surrounded by people; that's urban. Did I create the environment or did the environment create me? Have I learned to observe and pay attention because that's who I am, or has my environment made me? Bacteria and microorganisms are the reason we are here and alive, at the same time, some of them would have the power to annihilate an entire civilization, which means they are very powerful when unified, like us.[3] Urban environments are unique ecosystems that have a lot to offer, learn from and discover new things about, especially when shaped or influenced by the rapid development of technology and modernism.

— The Correlation with the Urban / Leaning from microbes —

Can microbes help save the world? Microbes know no boundaries and are adept at adapting, surviving and thriving in extreme and ever-changing environments. Microbes in the urban environment develop differently from "natural" environment in which humans are used to live. How we socialize, the way we move, the way we eat, build and design also influence the way bacterias relate to themselves or exist in general, and those changes which I'm referring to, begin to

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[1] phytobiome consists of a plant (phyto) in its specific ecological area (biome). These organisms include all macro and micro-organisms living in, on, or around the plant including bacteria, archaea, fungi, protists, insects, animals, and other plants.

[2] Jake M. Robinson, "The Effects of Anthropogenic Sound and Artificial Light Exposure on Microbiomes: Ecological and Public Health Implications " Research Gate, Feb 2021, accessed Feb 2024

[3] Article: "A global metagenomic map of urban microbiomes and antimicrobial resistance" Sciencedirect, June 2021, accessed December 2023

appear when the concept of a city started to be developed around the world. Green spaces, tourism, waste management systems, pollution, noise are some of the causes to explain some new variations in our urban environment, therefore, bacterias and microorganisms help us to understand better the relation between architecture and the non-human worlds, as our cities are as well alive and we cannot deny it.

Many of us are experiencing stress related to the urban life that our modern society has brought upon us, when living in a city has some down sides; the way our cities are developed, how we design spaces and the locomotion from one place to the other directly interfere in the way we share and educate ourselves relate to society and the environment around us.[4] Those stresses caused by our urban environment appears when humans thrive away from the more natural environment we use to live in. Modern life inside of cities brought us things as traffic jams, noise, polluted air and water, poor waste and space management, poor public security and health systems. The idea that it costs for you to exist, nothing is for free and you must work harder if you want to survive inside of a metropole.

As I walk around the city of Amsterdam, I wonder about the bacterial mix of this city and whether it would be possible to find the same mix elsewhere. The mix of bacteria and microorganisms that I find here would probably be very different from the mix of these organisms elsewhere, for example in London, Shanghai or Sydney. A study published earlier this year in the journal Cell analyzed the microbes present in 60 cities on six continents and found that each city has its own unique set of microorganisms, including 10,928 viruses, 1,302 bacteria, 2 archaea and 838,532 CRISPR arrays not found in reference databases. Samples taken from surfaces been touched more often by human skin, such as doorknobs, buttons, railings, and touchscreens, were indeed more similar to the human skin microbiomes than surfaces like bollards, windows, and the floor.[5]

"If you give me your shoe, I could tell you with about 90 percent accuracy the city in the world from which you came" [6]

I take the metro to go home and the city is busy, people moving frantically to get from A to B but still there's a lot of order, some natural flow going on, especially if you leave at peak times. And when they travel from here to there, the bacteria and microbes follow them along the way, also exchanging, arriving at another location and collaborating with each other. Transport is a fundamental part of a city, mobility and the quality of it. Factors such as: CO2 emissions, space management, waste management, cities with high population density need to learn from microbes when spending and developing their forms of locomotion. Perhaps if we move, they can move too, and if we move faster, they also do. By speeding up the way we move within the urban environment, there is a direct impact on the way microbes exist and relate to each other in that specific ambient. This acceleration in turn, leads to the multiplication of microbes:

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[4] N. Nicolaou "Allergic disease in urban and rural populations: increasing prevalence with increasing urbanization" online library, July 2005, accessed November 2023.

[5] Article "A global metagenomic map of urban microbiomes and antimicrobial resistance" Cell, May 2021, accessed December 2023

[6] Christopher Mason, "senior author of this work and professor at Weill Cornell Medicine in New York."

“Consumption of antimicrobial drugs is expected to increase by 67% by 2030”.[7]

The city of Amsterdam is very well built in terms of modern standards, as being part of this unique ecosystem more I think about the way human beings build their “urban oasis.” We plan the urban in a certain way, but when we put it into practice, it tends to change from what we imagined, often called the master plan or urban planning. There is still a lot to learn when it comes to building or living organically, sustainably, respecting life in general. A space created for one purpose and suddenly, in practice, that space ends up being used for something else, this shows that it takes more than just stacked materials — that is, just building for the need of progress — to design the *organisms of our city.* When urban spaces are being designed, factors such as: deep study of materiality and the contamination factors and cycles of a space for example, are some important aspects to build in correlation with the non-human worlds. The way we look at material in the urban environment, using them not only for necessity or aesthetics but with a deep meaning in how well we can manipulate them in order to achieve our needs more precisely. As said previously, “materials being used in surfaces such as doorknobs, railings, and touchscreens in the urban environment, were indeed more similar to the human skin microbiomes” making the choice of using some materials very compatible to us humans. Another example would be the contamination of that space, how dirty or clean this space is, how materials correlate with the original idea of cleanness. Building the urban environment often requires practical knowledge and understanding of materials in general, how they relate to each other and afterwards how those materials relate to us. When planning a city or any space in a 3D architectural software, perhaps those programs and also humans still have a lack in understanding what actually really has to be build and how it will be executed. When planning cities, spaces, the urban, often architects and urban planners see more the grid as a game inside of the software, by applying little understanding on the structure with a short command, it directly affects real life as well.

[7] President of the General Assembly “United Nations: Political declaration of the high-level meeting of the General Assembly on antimicrobial resistance.” digital.library.un, September 2016, accessed November 2023.

The end of the World

The things we considered positive and hoped to achieve in the past are no longer at the top of the list. Modern economic society is no longer a source of growth or optimism, as any of our prosperous jobs, for example, could disappear in the next economic crisis. The way we see progress as if we were waking up from a long dream or some parallel reality in which someone told us that technology and capitalism would solve our problems, that modernism would make life more pleasurable, less death, more love. A lot of promises were made about the systems and societies we live in nowadays, how today would look like, and now in 2023 we seem to be waking up from this dream to find out that things don't look as much like how we expected.

—— precarity ——

In modern societies, *human beings seek stability* in order to demolish or at least minimize mistakes and invisible events or anything that might slow us down. We try to avoid these situations. However, mushrooms for example can teach us a lot about indeterminacy and the precarious conditions of life without stability. Cities in general bring a lot of stability, so human beings settled down after several long eras of migratory and nomadic life, identifying places where they could settle and stay for an indefinite period of time, then developing communities within spaces where you could find everything you need to survive always close by. But when these singular goods can no longer be produced, a place can be abandoned, resulting in simplification (modernity) which brings alienation and creates spaces of abandonment only and exclusively for the production of capital. This results in precarious ambience where it can no longer assure stability, neither keep you "safe" from indeterminacy.[8]

Now, more than ever, we need to put evolution and civilization on pause. We're stuck with problems of living despite economic and ecological ruin, and what's funny, *neither the stories of progress nor those of ruin tell us how to think about collaborative survival*, which could be the solution to many of our unsolved problems.[9] Geologists have begun to call our time the *Anthropocene* - the time when human disturbance has overcome other geological forces. Anthropocene has not begun with our species, but with the advent of modernity and technology and

[8] Anna Lowenhaupt Tsing, *The Mushroom at the End of the World (*Princeton University Press, 2015) accessed October 2023

[9] Anna Lowenhaupt Tsing, *The Mushroom at the End of the World (*Princeton University Press, 2015) accessed October 2023

the destruction of landscapes and ecologies over long distances and time. Precarity is the condition of being vulnerable to others, and it shows us how to look around and not just ahead.

—— assemblage & polyphony ——

To build often comes with the hidden meaning of building for people to inhabit, and perhaps not just humans, but also materials and non-human creatures might profit from the architectural structure. Ecologists have turned to assemblage to get around the fixed and limited connotation of ecological "community". Assemblage is a collection of things which have been gathered together or assembled. It is as well an artistic form or medium similar to collage, created by three-dimensional elements projecting out of the substrate. On a philosophical level, also known as assemblage theory, this philosophical approach frames social complexity through fluidity, exchangeability, and connectivity. Assemblage can be more accurately described as the integration and connection of these concepts, it is both the connections and the arrangements of those connections. Assemblage can't hide from capital and the state, but they are places to observe how the political economy works. Which parts come together and which don't, what makes sense side by side and what should be kept at a certain distance, or even kilometers away. Microorganisms and microbes come together as two things to be seen in comparison when placed next to something else with a contrasting effect. Not only in architecture or spaces could we identify aspects of other microbial worlds, but also, for example, in music, as the term "polyphonic" means autonomous melodies intertwine. By connecting polyphony and assemblage, I get to the point where we would actually have a self-made construction or even a city. A form of polyphonic assemblage in which we grow organically in depth with the environment, the materials and the functionalities. It is about considering and always rethinking a form of construction in which strangely enough spaces and cities would be organized and reorganized by themselves, or grow out of a specific linear order. Polyphonic assemblage takes us into the territory of modern political economy, and moving away from the peripheries of capitalism, polyphony and assemblage becomes central to creating our urban environment.[10]

—— Contamination, Cleanliness and Dirt ——

The way we as a modern society, identify cleanliness and dirtiness in the urban environment is constantly changing. I have to say that I am - above average - a clean person. This ideal of cleanliness, a kind of obsession that I have, can also be seen as a desire for *maintenance*, to always keep things in order, in good shape. But what is cleanliness really? As mentioned before, "when we travel from here to there, the bacteria and microbes follow us along the way, also exchanging, contaminating and arriving at another location and collaborating with each other." We are already contaminated by our encounters; they change who we are and that is a kind of contamination in itself, by breathing, touching, smelling, hearing and so on.

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[10] Anna Lowenhaupt Tsing , *The Mushroom at the End of the World* (Princeton University Press, 2015) accessed October 2023

Industrialization brought us fossil fuels, plastic and poor waste management in general. Our cities have been affected by all this industrial waste, pollution and noise, and that's where we've changed what dirt and clean actually mean in modern times. Plastic is a major environmental problem: the *strong nature* of the *synthetic polymer* can make a plastic bottle of water take hundreds of years to degrade: N*early 80% of all plastic ever made will be discarded into landfills or polluting our ecosystems. The pollution caused by plastics and micro-plastics is present everywhere, they have been found within humans and many other organisms.*[11] Scientists, including Rosa León-Zayas and Jay Mellies have been searching for microbes with the metabolic capacity to digest plastic, and have recently published the genomes of a consortium of bacteria.[12] *Polyethylene terephthalate* (PET) is a widely used polyester that has a rigid structure, which makes it difficult for bacteria to degrade. Microbes carry out the decomposition of organic matter by utilizing carbon and nitrogen as the energy sources along with oxygen and water. Plastic is nowadays one of the most pollutant materials humans use in extreme amounts, which makes it one of the main causes for a certain environment to be characterized as polluted or *dirty*. The volume of PET fibers continues to increase and now exceeds 40 million tonnes per year.[13]

I imagine how magnificent it would be for a city to be full of untidy vegetation, muddy roads, leaves scattered everywhere, animals and insects of all kinds. The city I live in now isn't dirty, maybe it's too clean and is contaminated by the cleanliness that may have been planned. Modern cities have become a very unhealthy environment, where nothing really grows, everything is segregated, separated, with walled architecture, so how could we learn about *cleanliness and dirt as a form of integration*? Waste management play a big role as a separative component in modern cities nowadays. Considering plastic alone, we know that one day at a certain point, if we don’t change the way we perceive, design and behave - the surrounding environment, considering all non-human forces and worlds, going against a separate and segregated environment - cities and the entire planet are going to be filled with consumerism-plastic-human-waste.

One of the main pillars of evolution is communication in relation; to oneself, others and the environment. Evolution doesn't fit under a singular, separate, sterilized umbrella, it comes from contamination that generates diversity (and diversity is everything). It's what makes life so fantastic. We need to build our man-made environments in a more sensitive and diverse way, interacting with opposing and changing groups and genders, as well as negotiating, licit and illicit trades. *Dirt* and *cleanliness* are a matter of survival, essential and unique, and micro-organisms can perhaps help us to design cities and shape spaces that communicate in a more diverse way. We need to design spaces circularly, where stages of *production, collection, transportation, treatment and ultimate disposal*, are sustainable. What is essential for urban waste management is not really decided by us humans, but by rules that were put in place way before our existence which are still crucial for our survival and city planning. Some microorganisms can degrade plastics, toxins and agricultural waste, some convert excess fertilizer into nitrous oxide, a potent greenhouse gas. If we separate, we become dirty, if we unify, we become contaminated. Contamination is the solution.

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[11] Research: Microbial Consortia and Mixed Plastic Waste… National Library of Medicine, May 2022, accessed December 2023

[12] Research: Microbial Consortia and Mixed Plastic Waste… National Library of Medicine, May 2022, accessed February 2024

[13] Research: Microbial Consortia and Mixed Plastic Waste… National Library of Medicine, May 2022, accessed February 2024

——— One proposal for a practical solution ———

Each human body hosts *10 microorganisms* for *every human cell* and these microbes contribute to digestion, produce vitamin K (produce proteins for building bones and can be found in dark green vegetables, cabbage and lettuce) and promote the development of the immune system and detoxify harmful chemicals. Microbes are essential for the production of food such as bread, cheese and wine. The United Nations has 17 interconnected global goals to achieve a better and more sustainable future for all by 2030.[14] Microbes and microorganisms can and will play an important role in solving some of our unresolved questions about our society and survival in general. The following is a selection of some goals which help illustrate this intention.

Goal number 13: Renewable Energy
take urgent actions to combat climate change and its impacts.

- Microbes play key roles in the generation of some greenhouse gases, as well as in carbon sequestration. The Earth's soil is the largest terrestrial reservoir of carbon, containing three times the amount of carbon in the entire atmosphere and four times more than all the Earth's vegetation. Agricultural practices can increase soil carbon, which has two important results. The carbon enriches and stabilizes the soil, making it more suitable for agricultural production, and it is sequestered from the environment, where it would otherwise end up polluting the atmosphere. Investment in renewable resources as renewable electricity, fuels, chemicals and low-carbon materials can reduce greenhouse gas emissions.

Goal number 3: Healthy lives
ensure healthy lives, and promote well being for all at all ages.

- Infectious diseases caused by viruses, bacteria, fungi and other microbes continue to plague humanity. Those living in countries with limited resources and limited access to medical care suffer the most from neglected tropical diseases such as Malaria and Ebola. On the other hand, a third of the medicines we use are produced by microbes. Microbes are also factories for new medicines produced by recombinant DNA technology and the source of proteins used in vaccines and countless therapies.

Goal number 6: Sustainable water management
ensure availability and sustainable management of water and sanitation for all.

- Soil is the world's largest water filter, hence the importance of maintaining its health, integrity and microbial community and, on the other hand, some microorganisms have a beneficial impact on our water sources, such as those that can break down petrol or other dangerous toxins.

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[14] Department of Economic and Social Affairs, “Sustainable Development” United Nation website, accessed December 2023

Goal number 9 - Sustainable industrialization
build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.

Microbes are essential to many sectors, such as pharmaceuticals and food production, for example. It is extremely advantageous to harness the power of microbes to convert renewable resources into energy, this being one of the ways for applying a green bioeconomy. This future can increase the productivity and quality of agricultural products and generate a circular economy that can recycle abundant materials.

Ecology, or the entire non-human natural world, has become a political statement and interest, a science of state governance. Trees in Western countries, for example, have become a modern resource. Forests in most of Europe no longer have the characteristics of a natural forest: trees are the same height, the same age, nothing is really mixed up. Forests, rivers, trees, plants and land will always be of greater interest, more valuable, once they start to become rare.Within the metropolis, vegetation is already a very privileged and even luxurious domain. The forest has also become capitalized by humans, with a modern value.

— My Bed —

On a cold Sunday, I could spend a whole day in bed just because in bed I'm still connected, even if I've never been outside. My bed has become the centerpiece of my home, especially when it's cold. Not to mention that in bed I can do all the possible kinds of movements and stretches to get my body in the right position. Do I eat in bed? If I spend a day in bed, I'll certainly eat in it too. I only eat if I don't make a mess, but not a big problem if something happens. Eating in bed is often seen as a “dirty" thing. Well, if I leave traces behind or if I forget my food plate or any kind of leftovers, after two weeks, bacterias will notice the food and will start eating it. Microbes are responsible for both the production and destruction of food, same way they can both cause a disease and simultaneously cure it, they are a key element in reducing waste due to spoilage.

Keeping that thought in mind, I arrive home after some time away. In front of my door is a magazine. The cover headline reads: “End of privacy?” Curiously, I grab the magazine and look closely at it. It shows some kind of peace advert rather than, more often than not - war adverts. The article is a retrospective of a strike that John Lennon and Yoko Ono made on 25 March 1969, declaring their honeymoon public, and open to the public, as a way of bringing peace to the world[15]. This wasn't the first time I'd seen their strike, but reading it this time made me think more deeply about the fact that they stayed in bed for so long and afterwards, made it into such a big and

[15] Beatriz Colomina, article “The 24/7 Bed” pg.190, accessed October 2023

powerful statement. That worked out not only because of the people they were, but also because they completely changed how people used to see a bed or the concept of the bedroom itself, bringing the private space in the centre stage in a form of public declaration.

Here in Amsterdam, the idea of houses or buildings that resemble a fishbowl is very common. I use the term fishbowls because they resemble houses or flats in a specific location and building, where people walking on the street can see the inside of the house. While the inhabitant can also look outside, almost as if they were on the street, with a very fine separation between what is really the "private" house and the public domain. These houses are made with large glass windows which I think is essential when talking about aquarium-type constructions. John and Yoko came to Amsterdam for one reason, because here, at many instances, when doing something indoors, people can clearly be seen, and they want to be seen, even if they never leave their room.[16]

As I walk into my house I think about the fact that those two refused to get out of bed. The bed is no longer a place for conception only. Nowadays, I see the idea of a bed expanding; getting out of it does not only mean more exposure, and being in bed doesn't necessarily mean hiding. Nowadays being in bed often has the connotation of being hidden all the time and being exposed at the same time. The bed has become a place where you connect, rest and do all sorts of things.

My home has two main floors, the entrance leading to the ground floor with the kitchen and living room, and my bedroom on the second floor. I walk up the stairs and as I enter my bedroom I take off my clothes, get comfortable and perhaps lay down for a moment. The only piece of furniture in this room is the mattress resting on top of a wooden structure; my bed and a lot of empty bedroom space. Laying down on my bed, I come to think about its function. Somehow it feels like one of the center pieces of my house. You already know that I unapologetically eat in it, but if I wanted, I could also do all my other daily tasks as the bed floats in an infinite sea of information. It becomes a place not for resting but for moving, a place for action. I grab the magazine again and I open it, and on the page talking about the end of privacy, I read about the creator of Play Boy, Hugh Hefner, speaking about the last time he left his house[17]. That was three and a half months ago, and in the last two years, he left his house only nine times. Now I am sure it is possible.

According to Jonathan Crary, capitalism is the end of sleep, the bedroom, which nowadays is always under surveillance due to the use of data that constantly tracks us[18], where even in the most private space of our homes, we can't escape it. In modern times, being in bed often means being with a device, which makes real privacy disappear altogether. "The economy and ecology have become algorithms for places of progress, such as expansion, and no longer for their original meaning and function."[19]

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[16]Beatriz Colomina, article "The 24/7 Bed" pg.192, accessed October 2023

[17] Beatriz Colomina, article "The 24/7 Bed" pg.197, accessed October 2023

[18] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013, pg. 87

[19] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013, pg. 95

Burt Green, photograph of Hugh Hefner in bed, 1966.

——— On Sleep ———

As I continue reading the article from my bed, I stumble upon the story of the bed in the 17th century when “sleep became loosened from the stable position it had occupied in the stable Aristotelian and Renaissance frame-work. By mid 19th century, the asymmetrical relation between sleep and wake began to be conceptualized in hierarchal models in which sleep was understood as a regression.[20] While Schopenhauer contested this view by writing that “only in sleep we could access the true kernel[21] of human existence.”[22]

In bed I do feel I have all the possibilities in the world, I do feel connected to myself, to others through the internet, but not so much to *otherness*, and this is a concern of mine. I need a relationship with what's outside of me to ask some questions about who I could be and what I want to achieve. I used to connect the bed with feelings of rest, retreat, sleep and gradually I am understanding that I’m faced with a society in which it seems that many of us are never really asleep anymore. Capital is always the main goal, sleep is something that disturbs, it slows things down. This could potentially mean that disturbing the awaken state is never necessary or relevant,

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[20] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013, pg. 100

[21] awareness, consciousness, the fullness of presence, spiritual mental and physical body all connected in one.

[22] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013.

since we are all sleepless. If we are always awake, we are never awake. Paradoxically, sleep is a figure on which power can operate with the least political resistance and a condition that finally cannot be instrumentalized or controlled in a direct sense. If time is not anymore in our hands, our subconscious still is. Many researchers and thinkers have already meditated on the profound ambiguity that *sleep offers an impossibility of being positioned in any binary scheme*.

When I am asleep, all my belongings, my materialistic things, stay in place while in trance. Every day when I go to sleep, I don't even think about it, I know for sure that when I wake up, all my belongings will be at the same place where I left them before going to bed. In fact, the things one has in life, and the need to constantly survey, be alert, protect oneself, do interfere in how one sleeps, whether positively or negatively. As for me, not only do I know that my entire body will be safe after I wake up, but my property and goods as well, as much as I know that this is a privilege. The relationship between property and the right of privilege of restful sleep has it's origins in the 17th century and remains in force today around cites of the 21st century.[23]

Just by looking around myself in my bed I can clearly see that I do not only recharge myself, but also my devices. Without them, my bed would not be the same place as my devices also intervene in the way things are placed in my room. They might recharge but often they do not have a break, they never rest fully. When I am alone, laying down in solitude, I am actually always with my phone. The bed is definitely a place where people relate, have sex, get intimate, or at least the bed does have this connotation many times. Nevertheless when I am alone in bed nowadays, the last thing I feel is actually lonely. By laying down alone in bed, my electronic devices have the power to turn a very calm, soft and neutral situation into something exciting and energizing. Often when I reach this point, it is when I start to get insomnia, then the bed does not necessarily allow you to sleep anymore. Perhaps the design and construction of a space to rest, to retreat, have now been changed, or is it the idea of what *harmony* is that have changed?

Emanuel Levinas said: "Insomnia is a way of imagining the extreme difficulty of individual responsibility in the face of the catastrophes of our era. Insomnia always havers between a self-absorption and a radical depersonalization, and it provides no clear sense of a space for the other present, even though it does not exclude the concern for the other"[24]. And Hannah Arendt said: "The human condition is a constant rhythmic balance between exhaustion and regeneration"[25]. While Girgio Agamben said: "today there is not even a single instant in which the life is not modeled, contaminated or controlled by some apparatus"[26]. Then, if I can't sleep at all, and this sometimes happens, it is mostly because of the responsibilities I have as a human, the difficulties of my existence, anxieties of modern society and fears and failures. In other words, we do not get exhausted in the right way, and the ways we retreat from the exhaustion is not balanced… my electronics interfere in these balances too.

I tend to think of how technology also shapes the space of a bed, in order to avoid social irrelevance or professional failure; giving to me a constant "online presence". Technology somehow tells us that it occupies a lot of space with specific spatial characteristics. Modern architecture needs to interact with technology, with the digital world, otherwise its ability to fulfill and offer functionalities, will be reduced. We are heading to a direction where different *spaces* with different *functionalities* suddenly becomes *one*. There still is a separation happening when speaking about *collective forms* of mutual support or sharing. Before this would take place in different physical

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[23] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013 pg. 118

[24] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013 pg. 82

[25] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013 pg. 94

[26] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013 pg. 76

public spaces but now those spaces are disappearing with time, becoming one more resource to the market place. Everyone is “inside their private rooms” completely separated from each other and at the same time, all together online.

This electronic interfacing, all the mass immersion at a micro-logical level, might be said to constitute a new “negative” unity of passivity and alterity.[27] It creates the delusion of a time without waiting, of an on-demand instantaneity of having, while insulating from the presence of others. To repeat myself, “if we separate, we become dirty, if we unify, we become contaminated. Contamination is the solution”, but also sleep has the same potential. Sleep is the remaining barrier, the enduring “natural condition” that capitalism cannot eliminate. Sleep is the waiting of a pause. Sleep is a form of time that leads us elsewhere other than to the things we own or to things we are told we need.

Modern sleep also speaks about the big or small interval before sleep, when you go to bed, laying awake and alone in quasi darkness, indefinitely, for the desire of loss of conciseness.[28] Surrealist Robert Desnes was known for his ability to fall into deep trance-like sleeps. If we emphasize the duality of being in your full mind, totally present, resembles a state of deep sleep. If we could master the art of sleeping, we can utilize and facilitate (alternative) sleep in protest and as a contemporary way of life.

—— Some Conclusion ——

With this research, I also wanted to look for harmony in the urban environment after today’s separations and misconceptions. The first part about microbes, explains the main idea/concept of coexistence. The second part shows the ruptures in contemporary society.

Cities are being built in such a way that the harmony between the human and non-human natural worlds' disappears, where, in fact, together they could help each other build and improve their own systems. The way cities are designed doesn't take into account the entire surrounding environment.

One of the conclusions I want to bring, comes from a *collaborative survival*. Micro-organism worlds are also connecting with humans true sleep in fact. While in sleep, we do learn, listen, collaborate and create new possibilities within non-human worlds. Sleep perhaps is connected through contamination as a way of integration, applying its design; building and maintaining the environment around us. Contamination being an opposite of separation and segregation - where our cities are guiding us through; creating ruins for a organic spatial diversity. Segregation brings dirtiness, integration brings contaminated cleanness; the evolution we are all part of comes from contamination, contamination comes from diversity and diversity is our *collaborative survival matter*. Micro-organisms can perhaps show us ideas on how to design cities and shape spaces that creates diversity. To think and to plan, to design, elaborate, make it into something, look at the results, understand the outcomes, transport it. Locomotion to another place, letting your creation be absorbed by the environment, the impact, the life-time of it, all these processes should happen in collaboration. Perhaps the bed could englobe some characteristics of

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[27] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013 pg. 200

[28] Jonathan Crary, 24/7: Late Capitalism and the Ends of Sleep, London, Verso, 2013 pg. 210

microbes and urban environment; singular spot in our homes. The bed as a microcosm of the city where you connect, retreat, play, work and fully live, where the design and construction of that space (as so many others) have now changed and it keep doing so. The bed is an example of a microcosm that encloses these dualities, ambiguities, harmonies, misconceptions and microbes around certain spaces and environments. Sleep then have the potential of being used by the sleepers, us, independently and in relation and coordination with one another, to learn of microbes on our own scale.

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