

Bathing in Adversity

*The Immense Potential of an Environmentally Guided
Bathing Architecture*

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Bathing in Adversity

The Immense Potentials of an Environmentally
Guided Public Bathing Architecture

Final Report - Architecture

Kieran Mortimer

Abstract

Modern urban culture in many ways has distanced itself from the adversities that form the climatic, ecological and elemental conditions that surround us, adversities that formed our bodies, habits, and values within our inherited cultures. The glut of information and stimulus present within cities often overstimulates us and pollutes our focus, potentially making us apathetic to the hidden ecosystems our specialization has created. In this lack of adversity, a mismatch has been formed between our bodies and our surroundings that can be easily seen and felt in the crises of mental and physical healthcare, the rapid change of simple daily behaviour, the arguable loss in value of many longstanding cultural traditions, and the degradation of local ecosystems that potentially fuel larger climatic changes.

The Industrialized modern lifestyle of the typical Canadian city and the expected standards of living of the culture it inhabits seemingly do not place enough value on adversity. The human body is an antifragile system, it needs stress to grow. Furthermore, psychological evidence suggests that overcoming larger and larger stressors acts as a means of both making us more empathetic to the struggle of those around us, but also more in control of our own bodily systems, minimizing the negative impacts of future stress on personal health and better preparing a more competent system of facing challenge.

A Communal Bathhouse provides an opportunity to reintroduce some semblance of environmental adversity into the daily lifestyle of its participants, as bathing is a necessary function of human hygiene. Water as a medium holds immense sensorial contrasts, contrasts that can shock and stress the body. A Bathhouse can provide situations of meaningful adaptation that can give the individual a greater sense of bodily autonomy and understanding, a place in communal relation and ritual, and a deeper understanding of the nuances of our natural environmental surroundings through exposure to the outside elements and water bodies.



Figure 1 – Forest Creek

I have so many to thank for the blessing it has been to undertake this. To my family, friends, teachers and those i've met along the way, i'd like to thank you endlessly.

Thank you for reading!

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01

Introduction

Thesis Introduction

A sense of sameness can be felt today across much of the developed and developing world. Standardization, mechanization and an increase in access to increasingly sophisticated tools have removed many of the barriers of geography, language and culture that once separated people entirely, distilling to some extent the nuance of locality and vernacular response into a more global standard of lifestyle and expectation. The growth of the technological process through economies of scale, the consolidation of capital and the normalization of seemingly ever-increasing “standards of living” made via the products and processes we have access to, has created a culture of expected growth amongst the people well-connected to the global markets. The growth of our infrastructure, scientific understanding, and economic prosperity are seen as primary motives in the forward movement of this modern culture tied to ideas of **technological determinism**, the idea that technological progress is an end to itself^[1] – but we must understand that this pursuit for development is not and will never be the sole means by which a culture can develop, nor can we determine whether it contains or encourages the growth of a full and proper set of values from which we can derive both a successful behaviour for personal, social and environmental cohesion and a greater sense of life purpose and meaning.

We live today in what has been called a “technocracy”. A **Technocracy** is a model of governance wherein decision makers are chosen for office based on their technical expertise and background^[2]. On the surface this may seem normal – but in taking a step back and pondering the structure that makes up the technological mountain we today stand upon – we can realize that the intense specialization of our tools and occupations can very well leave us intensely ignorant about the basic processes that sustain and have sustained us in the past. The specialization of our cultures (more so seen in the “developed” urban world due to the impacts of the industrial revolution and the subsequent and evolving pace of evolution of our everyday tools since) has made hidden ecosystems out of processes of agriculture, water access, shelter, waste, energy management – and the importance of the proper use of the human body within daily life for many. The conveniences of modern living can breed a great sense of apathy because of what becomes hidden in the background. The rate of change and the submission of our cultural life to this change means we often have little time to look back and ponder what it is that is being lost.

I believe this is the basis for many of the more global challenges we face today. If we do not understand the processes that sustain us, and have been removed from the potential to act out certain motor habits altogether in the choices made most convenient by our culture and living environments, we face the risk of allowing solvable problems to fester into larger global challenges as people unknowingly contribute to systems of operation that have flaws they cannot see or understand, given they don’t have the perception to see or embody the problems to begin with. This



Figure 2 – The Stimuli of Water

problem is further compounded by the general novelty of immense information platforms like the Internet, where without a proper set of “rules” or “values” by which they might successfully be navigated – instead present the individual with a glut of undistilled information and no guidelines by which to process its physical, actionable, real world value outside of the algorithms imposed onto them through their browsing programs. With such a glut of information, the value we can derive from it seemingly decreases, hence the general apathy we see towards it in its presentation in our wider media sources.

As I’ll explain in this writing and proposal, I believe broader social change comes from the individual – down to their own motor habits, and so an understanding of the body is critical to a proper understanding of the world around it, and the perception of reality we create from that. In this way the normal behaviours of a culture become very important. In lacking meaningful environmental challenge that engages the body in adversity, we risk becoming physically illiterate. We can just look at the health data regarding the most visible health metrics, like the incidence of being overweight or obese in industrialized countries (arguably the most visible factor and so too concerning given its mass prevalence), to reveal the mismatch going on between our built environments and the needs of our bodies. **Physical illiteracy arguably spawns environmental illiteracy, if one does not understand the depth of functions their own body is capable of, how are they meant to understand its relations to the environments that surround them? If we do not understand the capacity and potential of our bodies, we may unknowingly limit the avenues by which we seek to interact with the stimuli our environment presents, as the environment presents contrasts and extremes that may be considered harsh or uncomfortable to the body not trained to cope with such stressors and stimulants.** We can become phobic to the very climates we inhabit simply because we can nestle ourselves within conditions of comfort through mass human intervention and mechanical dependence in our living environments. With environmental degradation being such a pertinent topic today, I feel this is important to consider.

This thesis aims to help rekindle the relationship between the individual, their body, and their environment through adversity. It seeks to embrace the contrasts and discomforts of the environment through the sensorial depths of water and our physical interaction with it in bathing – all while helping to foster the grass roots of a greater communal culture in Kelowna. The proposal is simply a public bathhouse. Water acts as a means of engaging the sensorial systems of the body given its depth of stimuli and necessity to both life and hygiene, yet it also inhabits the domains of extreme contrasts. Scalding hot to freezing cold, solid to liquid to gas, still to running – and the associated depth of stimuli attached to these state changes and more; water inhabits domains of contrast that can push the individual and their body into states of “survival”, from where we can learn to voluntarily control bodily systems often left in a dormant atrophy given the lack of stressful exposure they commonly face in our often hyper-convenient urban lifestyles. It is these contrasts that also characterize the atmospheric changes of the environments that surround us and their seasonality – so a communally minded bathhouse presents an opportunity to not only expose the individual to their body, but to do so while taking advantage of natural environmental processes that can foster deeper connections to ones own surroundings. Convenience and comfort often dictate the ways in which we choose to behave – and so incentivizing this style of bathing as a choice is key to its programmatic success. As such, depth of purpose will be provided in consideration of other recreational activities that can occur in and around the bathhouse, while a focus on creating simple rituals in the bathhouse will become a focus for building a communal bathing culture in the locale. Global bathing rituals are to be used as a guide from which to understand the human experience of bathing, encompassing intricate social, cultural, sensorial, environmental and architectural settings to produce meaningful experiences for the individual, and to help provide a better understanding of the often hidden realities that surround us in urban settings.

Endnotes:

(1) – “The Information Glut,” Technorealism – understanding the limits of information (Stanford), accessed January 5, 2022, <https://cs.stanford.edu/people/eroberts/cs181/projects/technorealism/glut.html?fbclid=IwAR29fA4ygaTfaUa6eJWnPzSqzUseSUMSGoJWNTRJ5xqVRHesoqXVxepgoCs>.

(2) – Neil Postman, “From Tools to Technocracy,” in *Technopoly: The Surrender of Culture to Technology* (New York N.Y.: Vintage, 1993), pp. 21–39.

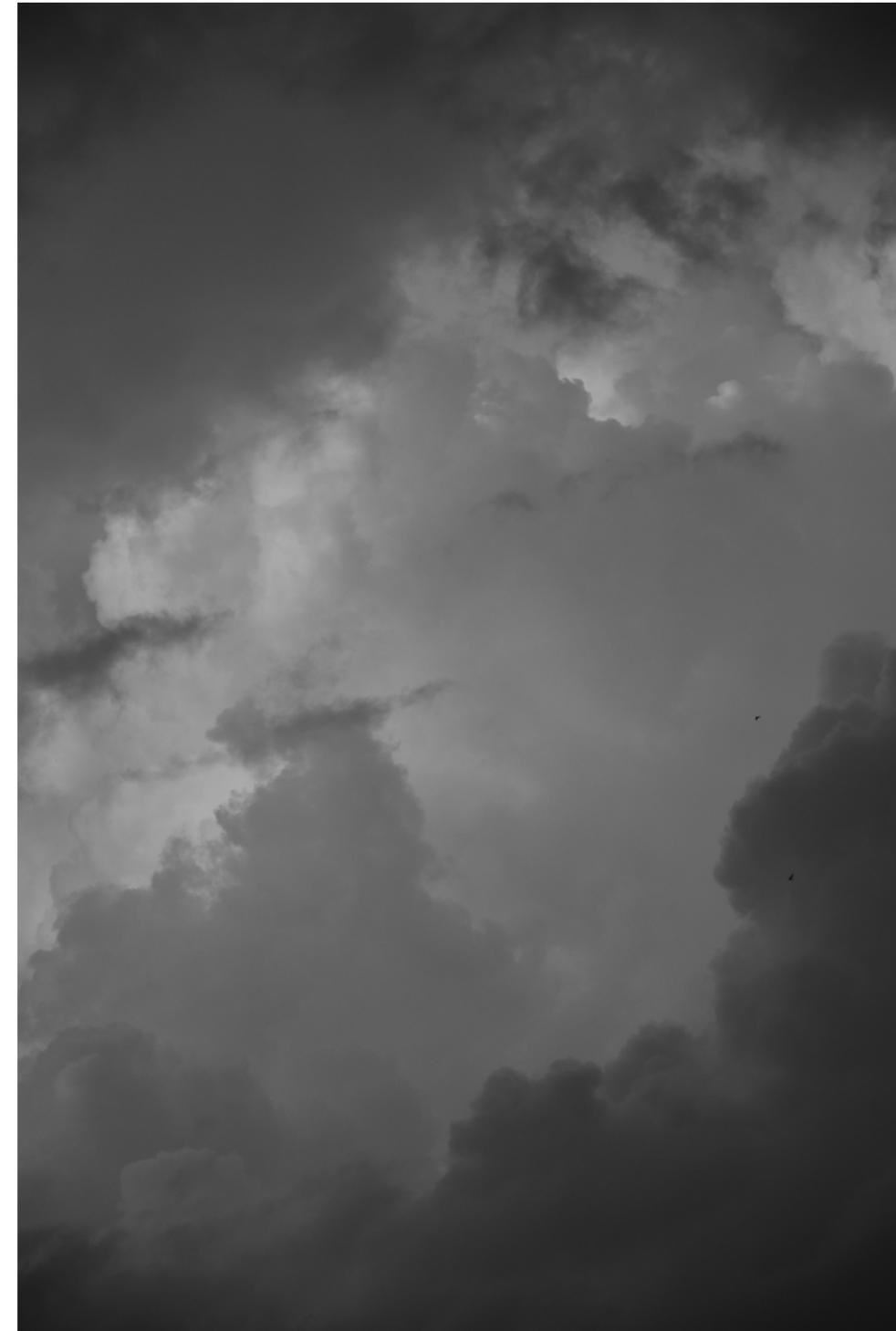


Figure 3 – Cloudy Sky

01

Introduction

Core Ideas

Human Perception and the importance of Focus

Our world contains a wonderful myriad of stories and rituals that help to develop and hone our values through our own personal actions – and it is ultimately the stories and narratives that we seek to act out that define or push the limitations of our personal potential. It seems however, that with the recent and extremely fast-paced evolution in behavioural changes and cultural normalcies in our daily lifestyles, brought about primarily through the mass migration of people into increasingly sophisticated and technocratically minded cities (fueled by the processes of industrialization, mechanization, digitization and automation^[1]), we run the risk of abandoning much of the diverse history of human potential held within vernacular culture for a more globalized and potentially more homogenized living standard. The concern with such homogenization is that it often lacks the meaningful adaptation that allowed cultures to survive and develop within the elements of a locale, instead relying often on standardized systems imposed into differing conditions without the benefit of a developed environmental cohesion through time.

In studying our history, we can quickly realize that the luxuries we often take for granted as normal parts of the expected standards of living today – in often unnoticed things like a stable food supply, heating and cooling, and fresh running water to name a few basics – were not the standard for the vast majority of humanity up until this point (and are still not the standard for much of the global population today). As different peoples were exposed to environmental hardships in different forms, each culture began to build up vernacular means of action within the nuances or patterns of the local environment to fulfill their basic human needs – actions that would have to strike a balance with the often unforgiving nature of the elemental surroundings. Many of these cultures and their vernacular means of perceiving the world have been made economically irrelevant in the wake of mass-production, standardization, mechanical convenience and a much more thorough logistical connection between many nations and people. Architecturally speaking, these processes gave rise to Modernism, a stylization that could begin to allow architecture to impose itself above the conditions of the site through a reliance on mechanical systems to regulate the interior climate in a comfortable manner. Architecture could begin to be mass produced, allowing for the rapid spread of infrastructure and the development of larger economies of scale and a more efficient production of material resources. This system of production generally abolished the material scarcity of fundamental necessities for survival for many of those living within the city (barring social or political interventions) – and helped to foster the growth of a global materialist culture. There can be no complaints made here given it has been these processes and changes that have provided the tools and information I am using to even make this thesis, all within the relative comfort of predictable and stable environmental conditions that allow me to focus. My concern is more with the radical



Figure 4 – Vernacular Disjoint

pace of cultural change, and how the shedding of even our most basic motor behaviours to the conveniences of mechanical dependence has robbed many people of experiences and understandings vital to the formation of what we might call a healthy lifestyle and perception of our lives.

Anthropologist Wade Davis cites a disturbing scenario playing out in our world today; each fortnight, another language is lost, and furthermore, half of the nearly 7000 languages we speak on this planet are no longer being taught to children^[2]. Think of what is lost alongside a language – with it falls a set of stories, a series of rituals and an understanding of the world unique to the inhabitants of the land and culture from which it grew – yet relative to our collective human story. One concern with adopting a more globalized culture is that of scale. As we scale up systems, the minute flaws that may have been unseen when the system was small or localized can become gaping wounds when scaled upwards with many more people dependent on them. The globalization of information for example through processes like the internet raise up inherent issues to the perception of the individual within their own reality. Here, in digital space, they are not constrained by the stimulus and information the immediate physical environment provides them, rather a large volume of exponentially growing information is made available through a simple search. Neil Postman refers to this simply as “**information glut**”^[3]. How are we to determine what information is valuable when there is simply so much information made available to us? We are in a culture consuming itself with information with little means of controlling the process. The fruits of convenience become poisonous in excess – but where do we draw the line? Is this human progress, or technological progress?

As perceptive creatures, we can only “see” so much, as the immense detail held within each interaction we have with the outer world is near infinite in complexity. As such, we can block out that which retains no relevance to the situation or goal at hand, without even a conscious consideration. This is called **Inattention Blindness**, the phenomenon where people often miss the occurrence of an unexpected yet salient event if they are engaged in a different task^[4]. An experiment was done to prove this phenomenon. In essence, the experiment had subjects focused on one task of watching two teams passing a ball, with the goal of counting the number of passes for one of the teams. While focusing on this task, a gorilla shows up into the field of view, stands in the centre of the scene, beats its chest, and walks off scene^[5]. What was found was that only half the participants noticed the very noticeable gorilla while focusing on the movement of the ball and counting the number of passes made^[6]. What this suggests is that, if placed outside of the realm of our goal-oriented focus and the broader sense of reality this makes, events occurring right in front of us might not even be distinguishable enough to notice their occurrence. The world literally presents itself differently as different facts and experiences are made known to us and alter what it is that we focus on. This suggests then that there is an immense importance that comes with the digestion of information and the choice of what means we consume it. The more information made available to us, the more apathetic we often become to it as an entity, as the physical systems we have inherited in our body and brains are not necessarily adapted to the novel mechanisms by which we can be inundated by near infinite and unfiltered information.

I’ll provide an example. When a car runs properly (to those with little knowledge of its the systems and patterns that make it function) – it is a car. When a car breaks down, it is no longer a car, rather a conglomerate of thousands of mechanical pieces, interactions and concepts unknown to the driver. You call an expert, take it to a shop, and if the mechanic is competent in their work, the problem is solved. Good! If we then consider how many of these complex systems we depend upon through their layering into the normal patterns of daily life, and the many more that will surely be discovered as our technological abilities improve further, the confusion surrounding what information is worth focusing on, and what information should be left unknown becomes confused. What is necessary when we are shown so much? With our inheritance of systems that help our lives to function relatively seamlessly – we in urban centres can be ignorant to the very processes that care for the basic necessities of human life itself, as these processes become hidden in an ocean of stimulus, and so too become unexpected. With many more people now moving into cities – the cracks in many of our environmental and energy systems have grown larger, evident in wider climate change and degradation and varied energy crises globally. The UN predicts that by 2050, 68% of the

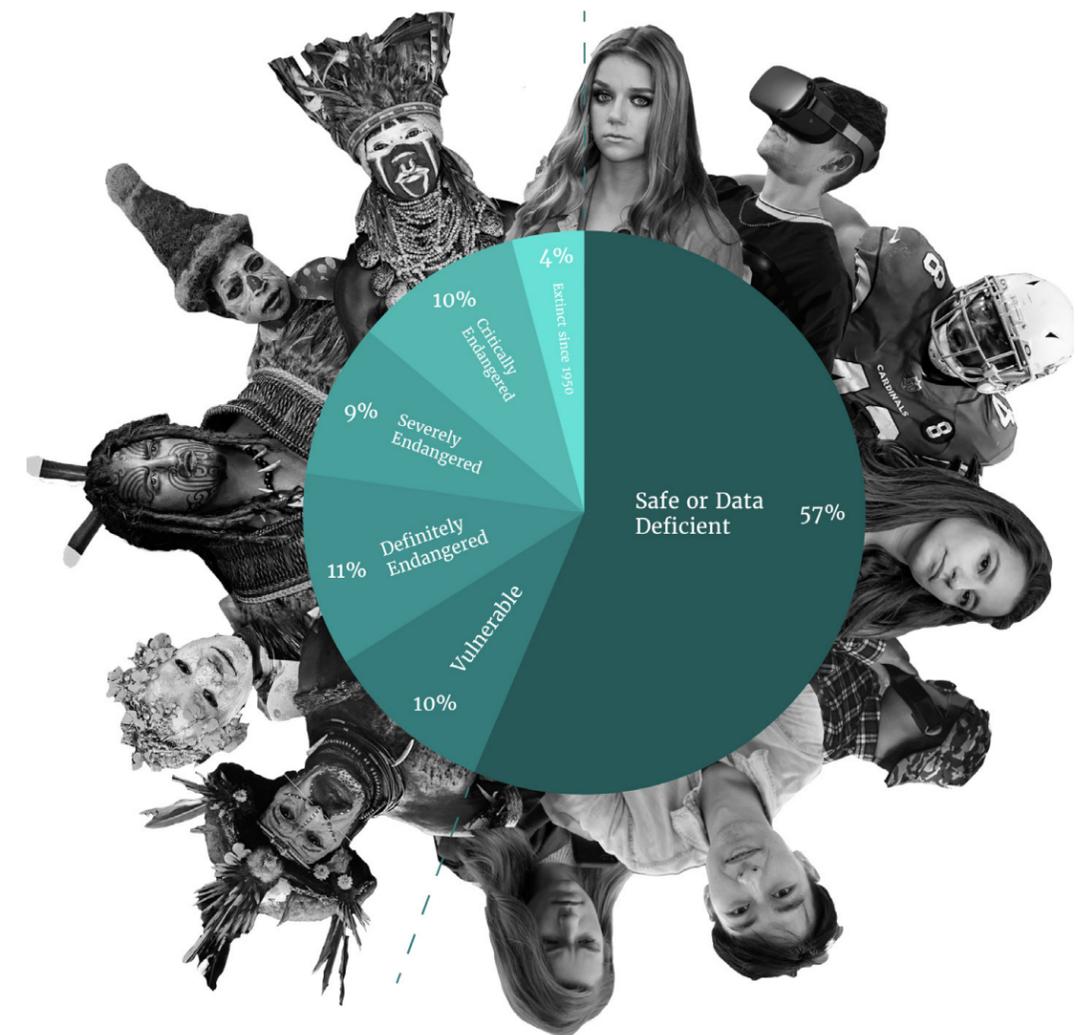


Figure 5 – Language Endangerment

expected global population will live in urban areas^[7]. That is an extra 2.5 billion people in cities^[8]. If we are to address problems like the degradation or mass-change within our broader ecosystems – people should be made more aware of them through their bodily interactions with it, and we should be relying on a more diverse system of adaptive environmental response that is less reliant on pure mechanical might to form a better cohesion between us and our surroundings. This is both an issue of choice and infrastructure.

The Necessity of Challenge

Human history has essentially been defined by our individual and social struggles nested within the realm of our environmental surroundings. The environment consistently demands adaptation on part of its occupants, and so our bodily systems have developed to cope and to adapt to these varied extremities. This is called **phenotypic plasticity**: the capacity of an organism to change in response to its environment^[9]. The capacity of the bodily systems are adapted to the demand placed on it by the environment, and the individuals' actions within it. This is why body muscle atrophies if not used consistently. Why burn the extra energy, energy that might not be available tomorrow, to upkeep a muscle group that is not being adequately challenged or stressed in your day-to-day lifestyle – especially so in scenarios where other vital bodily organs may need that energy? This same plasticity is true of many of our bodily systems – when not in use, the body tends towards energy preservation^[10], allowing for the atrophy of bodily systems that may have valuable use overall, but no demonstrated value in the way you are occupying your body at that moment in time. The same is true of the opposite, with exposure to stress through challenge and experience, each bodily system can mold itself to adapt to this new scenario (barring the conditions are not too extreme as to break down or kill the body).

In this, we cannot underestimate the changes that take place to the persona through stressful challenge. Each choice we make essentially creates a new person – as we are not stagnant beings. To willingly confront and overcome the challenges that present themselves to you is a step towards creating a new person more able to bear the weight of such challenges and greater in the future, preparing the body in a way we might consider somewhat proper. A new reality is presented to the individual when the body realizes it can cope with a previous challenge. This is why I find it outstandingly important to define what challenges are necessary to survival and greater meaning, and to accentuate these challenges in our modern lifestyles. In densely populated urban spaces this can be achieved well through the recreational architecture and public space that we inhabit or pass through while living out our lives.

Mismatch diseases are diseases that are not caused by inherited traits, rather those that spawn from changes in the living environment, where rapid or unexpected changes leave our body poorly prepared to adapt^[11]. These are widely apparent in modern urban culture given both its potential to flood someone with excess while also making arguably unhealthy behaviours readily convenient. Diabetes, Cancer, Heart Disease, Obesity, Alzheimer's, and many more dehumanizing and debilitating conditions are often associated with aging – and yes, while it is true that the rate of abnormality is heightened with increasing age (as we will all pass on from something at some point), much of our disease risk is borne from physical inactivity, poor sleep, inadequate nutrition, lack of proper hygiene or a loss in meaningful purpose in the culture and communities we occupy^[12]. These are instances where our environment is not cohesive to the needs of our bodies.

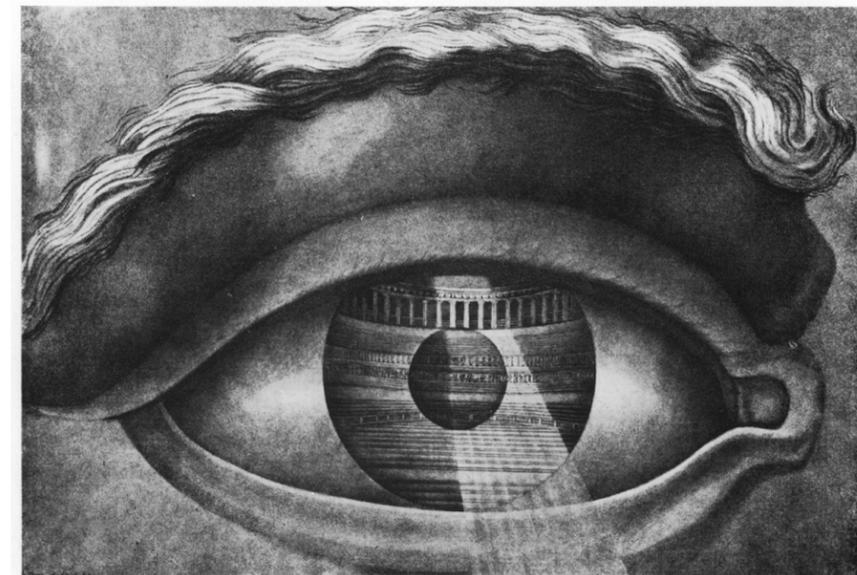


Figure 6 – Theatre of Besançon

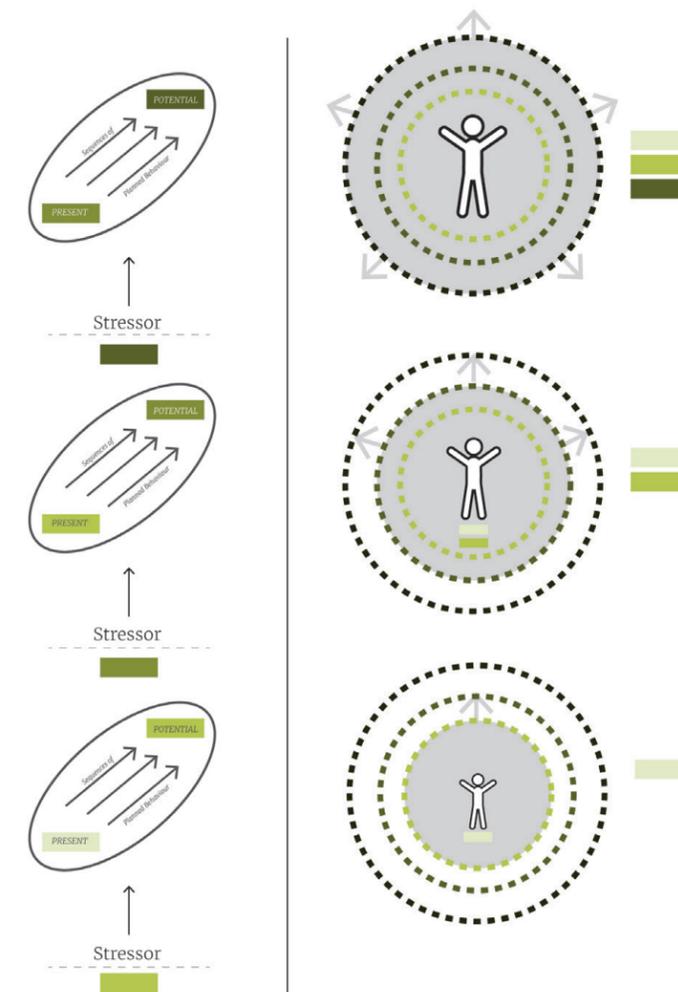


Figure 7 – Stress Tolerance and Competence Building

The Epidemics of Ideas

Given our cultural ethos is seemingly tied to the idea of technological determinism, our cultures risk degradation given the rate at which technology is changing even our most basic of individual behaviours, and so too our social rituals. Carl Jung noted that in the general loss of survival brought about by the relatively safe conditions we've created for ourselves in recent history, we will face instead the brunt of the depths of the human psyche as one of our main societal problems. Jung said one potential of this is the rise of **Psychic Epidemics**^[13], essentially an emotionally-driven and dysfunctional response to problems that may in fact exist, but whose responses are often out of proportion to the proposed challenge. Jung's belief was these epidemics latch onto unconscious **archetypes**^[14]; universal, inborn models of people, behaviours, or personalities that play a role in influencing human behaviour. In latching to these patterns of behaviour seemingly inherent to human socialization and our conceptualization of this through shared stories, ideas can propagate themselves upwards as people's unconscious motives feed into the active response, normalizing potentially unhealthy cultural responses to such challenges.

We can think of it as a step by step process, as we respond to challenges, the ways in which we respond en-masse become normalized. Inch by inch, if we are not careful, we can desensitize ourselves to the extremity of our response outside of the light of the events that "called" for such an action to begin with. Normal people can be completely transformed by allowing themselves or their standards to be slowly eroded or built up in ways that may not be socially healthy. We can see this in action in some of the ideas that drove events like Witch Hunts or the ideologies that drove some of the state powers to such extreme response to misplaced "challenge" in WWII. It can even be seen to some regard in some of the political and social responses to the current COVID-19 pandemic globally. The layers of complexity now inherent in our social structures that continually draw greater reference from social media platforms and other digital means of consuming or propagating information present fertile ground for the growth of misplaced, exaggerated, confused or ignorant responses to challenge as they take place within a non-physical realm of communication, and so are not necessarily grounded or limited by the realities of socialization or action in the non-digital space. Economist Milton Friedman stated that:

"When the only laws are those which everyone regards as right and valid, they have great moral force. When you make laws that people separately do not regard as right and valid, they lose their moral force"^[15].

When laws become too convoluted they risk losing their appeal to the moral instincts of the people they are put upon. Friedman explained that many people would never steal a nickel from their neighbour, but would have less hesitancy of manipulating or misstating their income tax returns^[16]. One set of rules is immediate and applies to our own social relation to others physically around us, while another is between us and a faceless entity we might not as easily relate to. The rise of arguably unhealthy and unsustainable materialistic tendencies falls into this realm. There is a lack of immediacy in much of our consumption given the complexity and distance involved in global trade and logistics, and so many broad injustices or flaws in the system of production are left to perpetuate as we often only consume the fruits of these processes rather than visually seeing the conditions that such processes create in their production or end of life discardment.

This is not to say that the conditions of Psychic Epidemics or convoluted complexity in our social normalcies are entirely avoidable as they are seemingly inherent to the human condition. It is my belief though that in the presence of some immediate environmental challenge, that is the facing in some fashion the conditions of bodily adversity present in geography, climate, elements or species local to a context in a way that is not hyper-curated and made orderly by human intervention and comforts, there is at least a connection to the immediate physical reality. Here, with lived experience in the reality of the environment, we can at least ground ourselves with an understanding of these often hidden conditions – experience that might better prepare us to make more conscious decisions as we understand the role of such places in the overall functioning and stability of our

broader ecosystems. Being grounded and confident in your ability to confront and work within your immediate surroundings will make us less likely to exaggerate a response to a challenge we come to face in that environment. You can better adjust your response to a challenge if you have training within said challenge, and so have a better understanding of the level of threat and so the needed effort or restraint for a response. My reason for bringing this up is that ideas can spread very much like an epidemic. To introduce and normalize healthier responses to our cultural challenges, such choices have to be made convenient and accessible within the social realm, allowing them to more readily spread between people who can act said values out.

Endnotes:

- (1) – Neil Postman, *Technopoly: The Surrender of Culture to Technology* (New York N.Y.: Vintage, 1993).
- (2) – Wade Davis, "The Wayfinders" Long Now Seminar Forum (January 13, 2010), https://www.youtube.com/watch?v=af_QsG16ixc&t=445s&ab_channel=LongNowFoundation.
- (3) – Neil Postman, *Technopoly*. (1993).
- (4) – Daniel J. Simons, "Inattentional Blindness," *Scholarpedia*, 2007, http://www.scholarpedia.org/article/Inattentional_blindness#:~:text=Inattentional%20blindness%20is%20the%20failure,task%2C%20event%2C%20or%20object.
- (5) – Ibid.
- (6) – Ibid.
- (7) – "68% Of the World Population Projected to Live in Urban Areas by 2050," United Nations (United Nations, May 16, 2018), <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>.
- (8) – Ibid.
- (9) – Daniel Lieberman, "Why Exercise Really Is the Best Medicine," YouTube (SAR School for Advanced Research, June 23, 2015), https://www.youtube.com/watch?v=8Cd0OB-xgoo&t=3017s&ab_channel=SARSchoolforAdvancedResearch.
- (10) – Ibid.
- (11) – Ibid.
- (12) – "Physical Inactivity a Leading Cause of Disease and Disability, Warns WHO," World Health Organization (World Health Organization, April 4, 2002), <https://www.who.int/news/item/04-04-2002-physical-inactivity-a-leading-cause-of-disease-and-disability-warns-who#:~:text=Sedentary%20lifestyles%20increase%20all%20causes,lipid%20disorders%2C%20depression%20and%20anxiety>.
- (13) – Carl G. Jung, *The Symbolic Life: Miscellaneous Writings* (Princeton, NJ: Princeton University Press, 1980).
- (14) – Carl G. Jung and Hull R. Carrington, *The Archetypes and the Collective Unconscious* (London: Routledge, 2010).
- (15) – Free to Choose Network. "Milton Friedman Speaks – Is Capitalism Humane?," YouTube Video. 45:16. July 31, 2012). https://www.youtube.com/watch?v=27Tf8RN3uiM&t=2079s&ab_channel=FreeToChooseNetwork.
- (16) – Ibid.



Figure 8 – Machine Living

02 Cultural Values

Values, Habits and the spread of Ideas

Sacred Events

Humans throughout their history have had a deep connection to the metaphysical – fastened deeply in the realm of consciousness, dreams and the heavens beyond. The core of every culture is essentially religious in a sense; sacred rituals were the means by which cultures developed, where groups of people entertained, tested and refined the values and behaviours that guided their lives through the interplay of people, objects and space^[1]. Essentially, a shared set of values and rituals is what allows people to communicate in some orderly cohesion. The development of cities was one borne from the need for convenient access to spaces from which these sacred rituals could take place. Julian Beinart cites the early city as a place that defined cultural values, a place where the sacred hubs of a culture were developed that entertained the greater value of such a culture in the vast expanse of the cosmos^[2].

The city form: its expansive terrain, sacred monuments and the orientation of its spaces – were generally dictated by their relation to a greater ideal^[3]. From this, our building methods quite literally came to define the means by which we symbolically express and entertain our cultural values and proposed behavioural ideals^[4]. High order abstractions are composed of higher and higher resolution, smaller and smaller models until you hit bodily action^[5]. Jean Piaget, a Swiss psychologist who specialized in the developmental patterns of children, notes that the mind is quite literally built from the motor action up in his **Theory of Cognitive Development**^[6] with the first stage of childhood learning being rooted in the sensori-motor state, the development of a bodily and sensory understanding through movement and the experiences made within that. So the rituals (the prescribed set of ordered actions) core to the culture became the means by which we built these ideal behaviours into our architecture and space itself.

This also explains the visual intensity of symbolism and iconography in sacred art and infrastructure. This realm of the icon often entertains domains of expressiveness that even our deeper attempts at communicating cannot put into easy words. We rely on symbols as a means of expressing ideas beyond language, nesting this type of communication between people somewhere deeper than the culture. It is the reason why, as an example of one sacred system, the Cathedral towers over the medieval European settlements, adorned with a scale that draws the gaze and the thoughts upwards, yet the minute detail that celebrates every small block that makes up the whole. Environmental “monuments” or elemental processes in landmarks like rivers, oceans, mountains, forests, plains and the elements themselves also came to become part of many cultures rituals through the attachment such processes had in sustaining our lives. There seems to be a correlation between the sacred values of a culture and the lands that allowed such conscious states to be reached

through both the challenges and the sustenance it provided.

Today’s world is still entirely subject to the environmental processes that surround us and the same conditions that ultimately fostered religious, ritualistic and value driven thinking, but our ability to dampen the forces of environmental impact on our lifestyles, alongside the increasing outsourcing for the production of the goods that sustain us, means we are experiencing a delay in the impact that our behavioural patterns have on our surroundings, and a rapid disconnect from the importance such changes have on our conscious and subconscious health. Our urban areas make possible the adoption of exclusionary “bubble” lifestyles – who can only really exist within the confines of the cityscape whose sustenance and needs are met by processes outside the “focus” of the city. I think this is evident in the zoning practices of many Western cities, where processes like agriculture, industry or production are often removed from the places that people most occupy, and instead a reliance on a euclidean zoning standard is put in place. This separation from other elements of life through these zoning practices will alter the “focus” of the individual, as physical experience in these industries that supply our needs will now have to be sought out rather than simply seen as a product of living everyday life.

Given that most of our ancestral history has been of people living subsistence-based lifestyles (producing through their own labour their basic needs with often limited avenues of specialization) – many of these sensori-motor connections that are the basis of bodily development can be underdeveloped or misunderstood for the modern urbanite. One must often make a concerted effort themselves to defy the conveniences now provided as the “standard” in order to strengthen or ground themselves within their context. Working out, playing outdoors, walking or cycling rather than taking mechanized forms of transit, gardening, growing food, making something for ourselves or simply being in the “natural” world – our current culture in many cases does not place implicit value on these processes, as many might consider these to be recreational or optional activities. This seems especially true when their basic necessities are provided for them without much input from the individual beside their personal spending habits.

Modern Development

The modern city is considered developed. The word “developed” presumes the advancement or elaboration towards a specific point or goal – in the case of our culture, this seems heavily tied to the rate of technological and mechanical achievement^[7], which is also heavily tied to economic growth in our current system. The reason I place the word developed in quotations, is that it often presumes that our culture offers the correct or proper means of social conduct or adaptive solution to a scenario, when in fact it is just one exploration in the potentials of cultural life – exploratory in some domains and ignorant in others. The metrics by which we consider a “developed” nation or culture such over an “undeveloped” or “developing” one ought to be questioned on the basis that humans are inherently problem solvers of challenges we ourselves seek and often manifest. Different cultures seek different solutions to the problems provided by their specific context. Wade Davis elaborates this point well,

“If you accept that we are all cut from the same cloth, you have to accept the corollary, and that is the fact that every human culture by definition shares the same raw genius, the same mental ambiguity, the same human potential – and whether that genius is invested in the technological wizardry which has been the great achievement of the West or placed by contrast into the challenge of unraveling the complex threads of memory inherent in the myth – is simply a matter of choice and cultural orientation. There is no progression in the affairs of culture, there is no ladder of success that goes from the savage to the barbarian to the civilized of the strand of London^[8].”

In the wake of efficiencies that allow us to survive in relative ease, we should be careful to not presume that our current way of life is the sole means of finding meaning in life itself, and if we should, we will surely be missing out on a whole host of potential outcomes. Ian McGilchrist writes

in *The Matter of Things*,

“To find the ‘richest’ view [of the world], the one that seems truest to the world as a whole, in the sense that it resonates with our experience in the richest way, the imaginative exercise of inhabiting a number of points of view is required^[9].”

The ability to entertain new points of view through exposure and choice is incredibly important in refining ones perception of their surroundings. We cannot easily see into the future beyond the immediate needs of present reality, blinding us to the prospect that our solutions today may, and more than likely will, be a part of the cause of novel challenges tomorrow. However, this does not downplay the significance of ritual and value within a culture. As explained earlier in the study about Inattentional Blindness, we rely heavily on our visual perception but are limited in our ability to “see” beyond what our immediate goal or framework allows us^[10]. In studying cultures of past and present we can see that humanity has a tendency to orient themselves around sacred values, and so create religions or movements that heavily mimic religious tendencies in order to fast-track our orientation towards a specific perception of the world through the behaviours or rituals encompassed within that system. Seeing new points of view allows us to adapt, to find the flaws within our systems, but we need the systems as to not be entirely overwhelmed by the infinite complexity that surrounds us. This is why honing our focus and defining our core values as a culture is so important to the stability of individual lives within it.

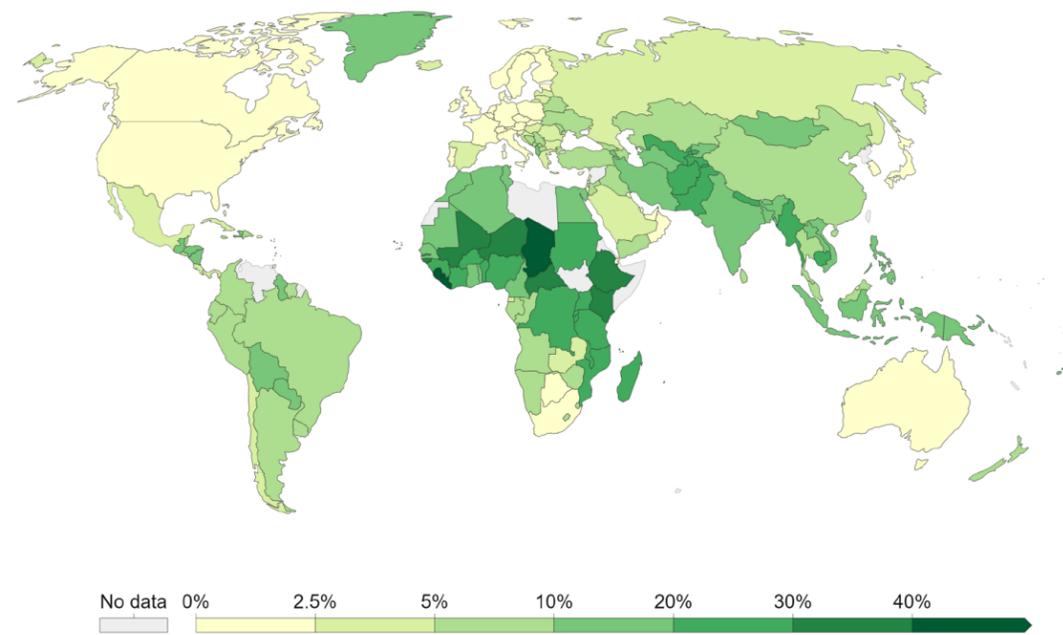
Changing technological standards the past two centuries have dramatically altered the “standard” life for most people. Take for example how much time in Western cities today are spent in spaces that are mechanically climatized and controlled. The standard work week is typically 40 hours, and 95% of the average urbanites time is spent indoors^[11], with our occupations driving a large part of that. 80% of our jobs in Canada and the US are primarily sedentary today^[12]. With this being an acceptable standard, many of our bodily and sensory systems are not being stressed to any meaningful extent in much of our architecture. The arguable purpose of the brain as an organism is to produce adaptable and complex movements^[13], as such, the very act of moving is delicately tied into the physiology of our entire being, not the least of which being our ability to effectively learn through the generation of new neurons or neural pathways in the brain through neurogenesis and neuroplasticity. While sedentary, there are fewer cues that something important is happening, perhaps giving the body some sense that it is safe. Movement however, might signify that we are moving away from something dangerous, or towards something rewarding, and so the brain stimulates increased production of proteins that help to develop or cement new motor pathways, so this new action or series of actions can more easily be remembered and acted out again^[14].

The standard office space often makes the human body a sedentary passenger to the flow of “productive” work in its design, with limited movement outside of walking, and the expectation that much of the work day be spent sedentarily seated. Standards such as this, sitting for a drive to work, resting after a long day of working, or an overall lack of physical variation and intensity explains to some extent the growth of sedentary borne health complications in our industrialized culture and modern world. Sedentary lifestyles increase all causes of mortality, double the risk of cardiovascular diseases, diabetes, and obesity, and increase the risks of colon cancer, high blood pressure, osteoporosis, lipid disorders, depression and anxiety^[15]. According to the WHO, 60 to 85% of people in the world—from both developed and developing countries—lead sedentary lifestyles, making it one of the most serious human issues of our time^[16]. This is not to say that we need to be consistently in some form of complex movement, as focus on a hyper-cognitive task could surely wane while engaged in movement, rather that we need to be in a state of relative stagnation much less consistently than we currently are.

If we are not critically aware of the incentives or complacencies we standardize through our infrastructure and cultural normalcies, we risk propagating unhealthy behaviours and perceptions of the world around us through mismatch design.

Share of GDP from agriculture, 2020

This is measured as the value added from agriculture, forestry and fishing products as a share of gross domestic product (GDP).



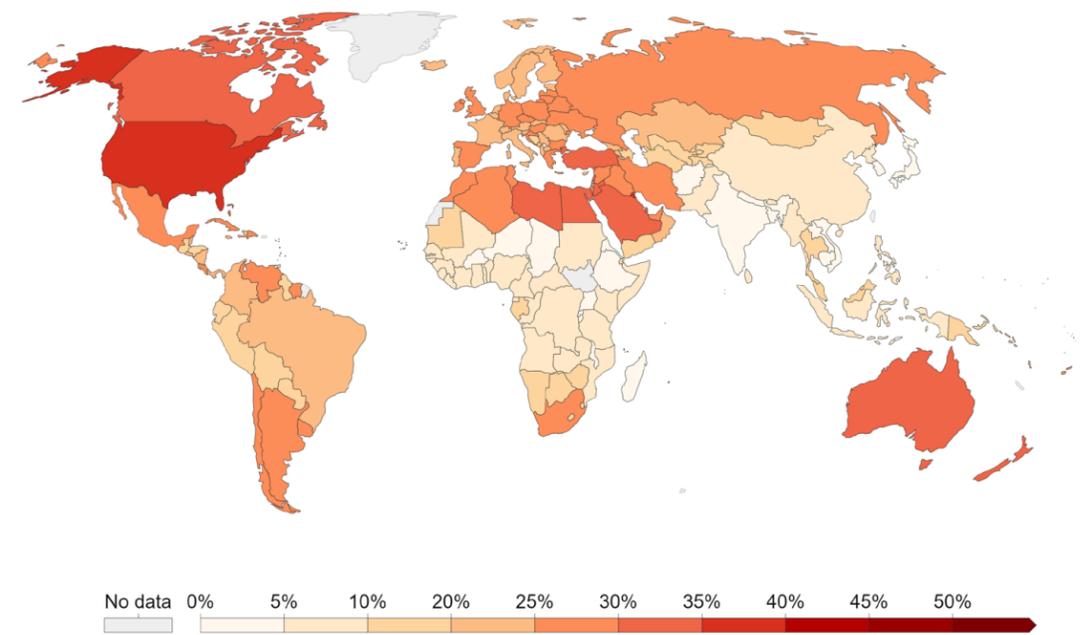
Source: World Bank and OECD

OurWorldInData.org/agricultural-production • CC BY

Figure 9

Share of adults that are obese, 2016

Obesity is defined as having a body-mass index (BMI) equal to, or greater than, 30. BMI is a person's weight (in kilograms) divided by their height (in meters) squared.



Source: WHO, Global Health Observatory

OurWorldInData.org/obesity • CC BY

Figure 10



Figure 11 – A Quiet day in Dinkelsbühl

The Value of Human-Scale Design for Beauty

The modernist ethos carried with it an implicit fascination with the potentials of the machine and has dramatically influenced the state of modern architecture. Making formal intent a result of a mechanical functional desire has in many ways made the human body less of a focus in urban design and architecture, and as such has isolated the body from opportunity instead given to objects like cars in the urban streetscape. We have given so much thought to the machine or the mechanical system in the “efficiency” of the city and the lifestyles within it, that we have in many extents forgotten why designing for the body as a primary entity is a worthwhile pursuit. Jan Gehl goes as far to say,

“If life between buildings [that is focus on the domain of human scale in movement, activity and socialization] is given favourable conditions through sensible planning of cities and housing areas alike, many costly and often stilted and strained attempts to make buildings “interesting” and rich using dramatic architectural effects can be spared^[17].”

Buildings are essentially a backdrop to human socialization. Beautiful buildings are not necessarily such because of their material and formal intent alone, rather their ability to work with the human scale – to accept the streetscape as a scene to be added to rather than bluntly placing an object that does not speak to the people using the space or their senses. The reasons we keep and protect buildings are for reasons in which they speak to our senses whilst remaining functional and accepting to the rituals and actions that occur in and around them. They remain relevant because they are beautiful, and they are beautiful because they speak to the scale of the human body and social realm. If a building does not inspire any sense of beauty or meaning on part of its occupants, or if it lacks meaningful cohesion to its social surroundings, what argument would it have for preservation when its functional use ceases? There is a reason as to why many European nations today are sites of architectural and historical pilgrimage for many travelers, there is an inherent sense of beauty held within the spaces and cities that were often built around the movement patterns of people walking and the availability of local resources and craft, and therefore evolved certain characteristics and motifs that speak to the human scale of experience. Canadian cities may be desirable travel destinations, but I don’t believe (aside from certain historically bound cases like Montreal) that they are necessarily such because of their architectural culture like many European cities are. What seems to make Canada attractive to many of the people I have spoken with outside of Canada is the “raw” nature that can be found. Vast swathes of land almost unaltered by human interventions given the sheer size of the country, the many unique geographical features within it, the grouping of most of our population into a few cities across the border and a fairly small population to occupy all of this land. Our land really serves as a crutch for many of our cities and suburbs and their lacking beauty.

Our buildings are an immediate expression of our core cultural values. With building and maintaining infrastructure such an energy and cost intensive process, both in the past and now, it would make sense then that the values of a culture drive the process of building. It would seem that the value of local stylization, craftsmanship and culture has often fell to the conveniences of rapid growth in many places, and so too altered the “focus” of the people inhabiting such buildings. The city is often treated as a machine, and the Euclidean nature by which we often consider its function in many Canadian cities does not allow us to easily make parallels between the presence of intrinsic beauty and economic vitality. Aesthetics, architectural ideas, and regional sensitivity seem to take a back seat to the more practical, utilitarian principles of design in the development market through building code, construction costs, economy of scale, and a seeming trend in the industry to bypass architects altogether. Peter Simek writes in response to the changes the industry has seen from the introduction of formulaic design tools and the software used that build incentives into designing in certain ways over others,

“In a sense, then, what we are seeing being built in Dallas and across America is the perfect architectural expression of our age: hyper-commodification, computer-driven formality, an over-attention to surface considerations, generic, inconspicuous façades papered-over with the promise of pseudo-luxury amenities,



Figure 12 – Mechanical Streets of Chicago

and a dislocation for regional or cultural distinction or authenticity^[18].”

Once we have developed an infrastructure, it often becomes very difficult to alter in any significant manner, as people will have begun to build both their lives, lifestyles and further infrastructure around it. I think the car is the easiest mechanical intervention to speak about in the realm of urban design, particularly because our infrastructure has so heavily incentivized and solidified its use. These tools are fairly individualistic and separate from the human scale of sensory exploration, and so many of the design standards we have today are arguably attempts to beautify the experience of architecture for the person traveling in the car at 50km/h or more (or to ignore the standards of beauty altogether – as you can leave an “ugly” area much more quickly). Details here are not as readily needed given the speed of the car limits the time to see such details, and so the detailed sensitivity of design craft has lost much of its value. We also have to think of the incentives this creates. If our values are placed into the mechanical efficiencies and conveniences of spaces rather than the humanistic qualities, we are incentivizing further dependence on that system. What sensory incentive is there to walking through a transit corridor engineered for the rapid movement of cars? Infrastructure like parking lots, parking stalls, mechanic shops, gas stations, highways, stop lights and much more are not necessarily considerate of the experience of the pedestrian who now has to cope with their own safety alongside these routes, and the discomfort that may come from them given their points of interest and the distances between them were designed for a fast-moving car rather than a slower walking person^[19]. Incentivizing new transit options in trains, buses or trams may help alleviate some of the car dependency we have created, but this too often lacks the physical movement and sensory depth that simply taking a walk or using the body can have. If we are to value human and environmental health more readily in our architectural and urban planning practices – I certainly feel that placing effort into diversifying the ways in which people can move and interact with others and their environments through the constraints of the human body as a vehicle will be much more socially and environmentally sustainable than what seems to be the trend of creating more “sustainable” architecture through more efficiently sourced materials, energy production or a reduced energy load. This is not a useless pursuit, rather it seems to be a surface level solution to a more systemic issue regarding the values we are building into the culture through design normalcies.

The economic costs of ornating a building with more delicate craft is apparent, and is part of the reason as to why cheaper material and building practices reign in the wider culture. But you have to think that much of the practices that made such materials or design practices cheaper are themselves a product of an economy of scale, where continued contributions to any system will create an easier access to that system throughout. Further, red tape in areas such as zoning by-laws that have historically relied or favoured a Euclidean design practice in many Canadian cities have often incentivized the development of single-family homes or low density commercial property (small stores with large parking lot requirements). This has contributed to creating the conditions of housing shortages through their poor land use (low density, lower tax return for that low density with a high amount of inefficiently used space^[20]) and the further dependency on space intensive car infrastructure that often drives the argument for the economically driven but sensorially lacking building styles made cheaply to fulfill the urgent demand for new homes and infrastructure.

My argument here is that we are receiving the fruits of our wider cultural values in our architecture. Jan Gehl says, “First we shape our cities, and then our cities shape us^[21]”, my concern with the ways in which many people now live is that of the social carrying capacity of these design principles. There is obviously some concern in the building industry over the energy intensity of building itself, with close to 40% of all annual carbon emissions globally being tied to construction^[22], but the social cost that comes from a lack of bodily understanding are quite apparent in the cost of healthcare, the cost of maintaining extensive mechanical infrastructure and the wide presence of mismatch disease in our culture. The human body is a tool that needs more value placed onto it. This presents an opportunity to reintroduce a simplified structure to the public realm to place better value in the body, and so too our social and environmental health.



Figure 13 – Javelin throwers Ancient Greece

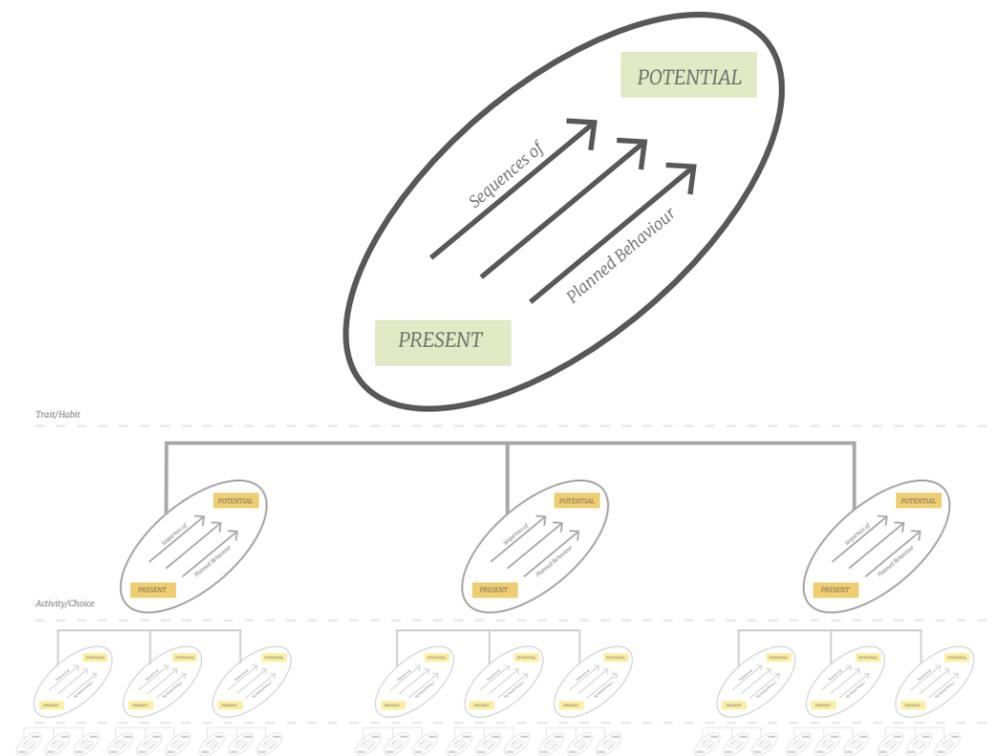


Figure 14 – Motor Habit Buildup

Individual or Collective Choice?

Is one's health a product of culture, or a product of personal attentiveness? If an environment or culture encourages a certain set of behaviours – should the individual be responsible for their own health? This question is a peculiar one, as it requires asking to what extent we remain an individual in our own conscious state given the collective nature of our human stories and civilizations. It requires asking what our society already provides in regards to the diversity of choice for its participants. If an activity or infrastructure is present, it implies it holds some value to the culture that uses it^[23]. Should it become irrelevant – it will very quickly fall into disrepair. We do not know what we do not yet know, alluding that health to a great extent is a byproduct of the cultural or communal standards, values and normalities present in our own environment – but still, things are never quite that simple.

Each environment instills on its subjects' extremities that must be adapted to and coped with. Should these elements be too extreme, the subject would perish. As such, human cultural development has seen us push our bodies to their absolute limitations in an effort to discover where those limitations are. It explains to a great extent our current and ancient fascination in fields like athletics^[24], where one pushes their body to the best it can be in performing one set of actions alone. The meaning of "sin", heavily present in the Western sphere of thought, is quite literally meant as "missing the mark" (present in similar root words from both Greek and Hebrew translations) – much like an archer might miss his target^[25]. It implies that there is an ideal to be strived towards in particular domains of life, a honing of both focus and craft towards it. This striving towards an "ideal" also explains our deep connection to stories and storytelling, acting as a means of inhabiting a realm of potential – distant to our current reality, and guiding us through the characters failure or fruition in often extreme or exaggerated circumstances as a means of moving towards a new perception of what we ourselves can achieve. It would seem that the challenge in striving towards acting out higher values and ideals lies at the very heart of human meaning.

Neuropsychologist Alexander Luria defines our motor output as a series of "kinetic melodies"^[26], these melodies stack on top of each other to form notes, phrases and then when combined with other people or environmental stimulus, an orchestra is made that enhances the experience that much further. Brushing up with extreme conditions has meant that the sensorial systems of the body have evolved and grown alongside such exposures, and so within each of us, inherited motor highways of sorts exist to provide us with ease of access to the kinetic melodies, notes and phrases that allow our body to react and cope within extreme conditions on an involuntary basis.

To explain this very simply, the brain is essentially composed of neurons that fire to cue the body to act something out. In action, neurons begin to fire together and form pathways that link up a composition of movements that make that action easier to do – think of it like an athlete that has trained a certain set of motions so many times to the point that it is inherent in their habitual muscle memory. As a certain pathway is repeated, neuron pathways grow thicker myelin sheaths^[27] – this is sheathing that allows electrical impulses to transmit quickly and efficiently along the nerve cells, this means a repeated motion or behaviour can become unconscious, and it is in this unconscious action that the body and brain save energy resources to spend elsewhere. We do not have to attentively focus on motions like blinking or breathing because their cues are part of these inherited systems that involuntarily provide us with a basic structure from which our bodies operate and react within their environments^[28]. In contending with extremes, physiological preservation reactions, to help prepare and repair the body in such environments, are also part of this inherited library^[29].

The concept of antifragility explains our fascination with the extreme quite well. An **antifragile system** is one that uses stress as a means of making itself stronger^[30]. Just as the body and its bones, muscles, or immune system use environmental stresses as a means of training themselves up to deal with such and more, our cultural ideas and normalcies too need a healthy dose of stress to function optimally. What kills you will not make you yourself stronger – but pushing out into zones



Figure 15 – Order and Chaos

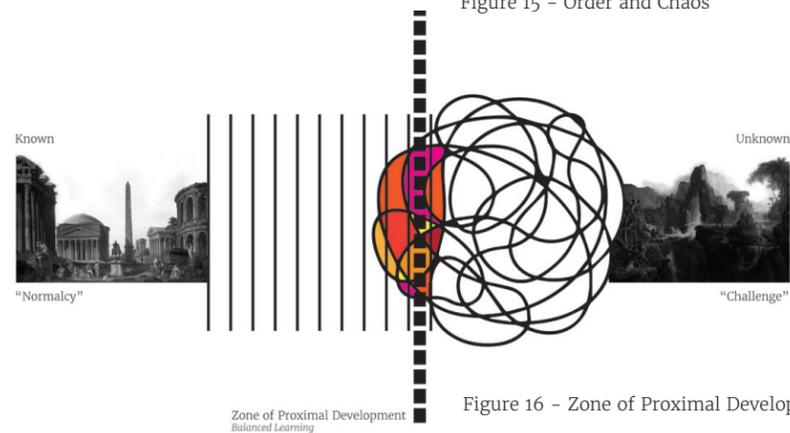


Figure 16 – Zone of Proximal Development

of discomfort; having one foot in the door of what we know and one in the fog of the unknown, is a means of both balancing the human condition while exposing it to enough stimulus to find deeper meanings through lived experiences^[31]. We need to expose ourselves to these extreme edges of our known capabilities if we wish to discover more about ourselves and those around us^[32]. This is partly the reason as to why ritual is so important to civilization – it provides an order from which people can expose themselves to this ‘unknown’ without taking on too much^[33]. It also explains the fascinating culture of bathing. The extremities seen within many bathing traditions provide a means of exposing our bodies to the extreme edges of our environments, allowing the bather to become climatized to both their own senses while allowing the bodies inbuilt survival systems to react – activating parts of the brain not commonly used in day-to-day modern activity^[34]. Bathing appears to be one of the most meaningful ways of providing some means of the ‘wild’ that our ancestors’ bodies adapted to living with – within an urban setting.

So how much free will does the individual actually entertain to make responsible choices? To suggest that an individual alone can assign themselves a full value structure without the influence of others or the culture is naivety. We are social creatures, and as such learn from the presence and activity of those around us. We have also inherited bodies with implicit biases towards certain means of behaving. Full responsibility cannot be put on the individual nor the society itself. We do however need to consider the role of mentality in shaping our individual and collective perceptions of reality. Comfort can dull our body and so too our perception of proper behaviour. In instances where there is a lack of bodily challenge, mentality can grow soft and make the standard stresses of life that much more stressful.

I like to think that the building blocks of the tipping points that define cultural movements are a distinct and vernacular combination of both the environmental stimulus made apparent to the individual – but also the potential of repetition in choice. If there is enough stability from which a single or a series of choices can continually be made, the body will work to cement that habit pathway into its repertoire of repeated motor outputs, simplifying the effort that goes into performing an action or acting out a certain behaviour or idea. According to James Clear, the likelihood of a choice being repeated enough to form **a habit is dependent on four steps**^[35]. The cue, craving, response and reward all act to get people to repeat certain actions or behaviours, and these are made easier if the choice is obvious (not hidden or invisible), attractive (stimulating in ways that are not deemed unattractive to the individual), easy (convenient and comfortable actions are easier to act out than difficult ones) and lastly the action should be satisfying (have some meaning or value towards what it is you are moving towards). If enough people share a set of similar habits, a culture is born that acts much like a virus would spread. If it is easy to communicate, access and understand, the inherent value of this idea or action, even if said idea or action requires voluntarily confronting difficult challenges, will reach a tipping point in the culture from which that habit becomes a normal part of the broader society it inhabits allowing it to spread rapidly while allowing for easier and more socially acceptable means to access to that set of actions^[36]. This is all a duality though – the ability to entertain differing choices hinges greatly on the access and understanding of the existence of these choices to begin with. Having the established facilities in place to influence that choice gives the individual more leverage in carrying that action out via induced demand. Jan Gehl states, “*First we shape our cities, and then they shape us and our quality of life*”^[37]. People go where other people are, so why is it that bathing, an activity holding immense potential in exposing us to our bodies own capabilities, is left as a solitary and lonesome act in most modern cities? Specialization has affected it immensely.

Endnotes:

- (1) – MIT OpenCourseWare. “1. Introduction to Theory of City Form”. YouTube Video. 1:09:39. March 6, 2014. https://www.youtube.com/watch?v=k2_wuThLG6o&t=3589s
- (2) – Ibid.
- (3) – Ibid.
- (4) – Ibid.
- (5) – Jordan B. Peterson. “Biblical Series I: Introduction to the Idea of God”. YouTube Video. 2:38:28. May 20, 2017. <https://www.youtube.com/watch?v=f-wWBG06a2w>
- (6) – Sprouts. “Piaget’s Theory of Cognitive Development”. YouTube Video. 6:55. August 1, 2018. <https://www.youtube.com/watch?v=IhcgYgx7aAA>
- (7) – “The Information Glut,” Technorealism – understanding the limits of information (Stanford), accessed January 5, 2022, <https://cs.stanford.edu/people/eroberts/cs181/projects/technorealism/glut.html?fbclid=IwAR29fA4ygaTfaUa6eJWnPzSQzUseSUmSGojWNTRJ5xqVRHesoqXVxepgoCs>.
- (8) – Long Now Foundation. “The Wayfinders: Why Ancient Wisdom Matters in the Modern World | Wade Davis,” YouTube Video. 1:53:42. June 17, 2020. https://www.youtube.com/watch?v=af_QsG16ixc&ab_channel=LongNowFoundation
- (9) – Iain McGilchrist, *The Matter with Things: Our Brains, Our Delusions, and the Unmaking of the World* (London: Perspectiva Press, 2021).
- (10) – Daniel J. Simons, “Inattentive Blindness,” *Scholarpedia*, 2007.
- (11) – Neil Klepeis et al. The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants. *J Expo Sci Environ Epidemiol* 11, 231–252 (2001). <https://doi.org/10.1038/sj.jea.7500165>
- (12) – Sharon Parry & Leon Straker. The contribution of office work to sedentary behaviour associated risk. *BMC Public Health* 13, 296 (2013). <https://doi.org/10.1186/1471-2458-13-296>
- (13) – TED. “Daniel Wolpert: The real reason for brains”. YouTube Video. 19:59. November 3, 2011. <https://www.youtube.com/watch?v=7s0CpRfyYp8&t=64s>
- (14) – What I’ve Learned. “Why Exercise is so Underrated (Brain Power & Movement Link)”. YouTube Video. Dec 17, 2016. <https://www.youtube.com/watch?v=DsVzKCKo66g>
- (15) – “Physical Inactivity a Leading Cause of Disease and Disability, Warns WHO,” World Health Organization. 2002.
- (16) – Ibid.
- (17) – Jan Gehl, *Life Between Buildings: Using Public Space* (Washington, DC: Island Press, 2011), 24.
- (18) – Peter Simek, Catherine Wendlandt, and Matt Goodman, “We’re Still Trying to Understand Why New Apartments Are so Ugly,” *D Magazine*, December 13, 2018, <https://www.dmagazine.com/frontburner/2018/12/were-still-trying-to-understand-why-new-apartments-are-so-ugly/>.
- (19) – Not Just Bikes. “Business Parks Suck (but they don’t have to)”. YouTube Video. 15:42. April 18, 2022. <https://www.youtube.com/watch?v=SDXBoCY2tSQ&t=751s>
- (20) – Not Just Bikes. “Why American Cities Are Broke – The Growth Ponzi Scheme [STo3]”. YouTube Video. 9:38. January 11, 2021. <https://www.youtube.com/watch?v=7IsMeKl-Sv0&t=174s>
- (21) – Gehl, *Life Between Buildings: Using Public Space*. 2011.
- (22) – “Building Sector Emissions Hit Record High, but Low-Carbon Pandemic Recovery Can Help Transform Sector – UN Report,” *UN Environment*, December 16, 2020, <https://www.unep.org/news-and-stories/press-release/building-sector-emissions-hit-record-high-low-carbon-pandemic>.
- (23) – Louisiana Channel. ““Great buildings express their true essence to the world.” | Architect Bjarke Ingels”. YouTube Video. 47:57. December 19, 2017. <https://www.youtube.com/watch?v=dh96J9iXGyk&t=2000s>
- (24) – Jordan B Peterson. “2017 Personality 16: Biology/Traits: Incentive Reward/Neuroticism”. YouTube Video. 1:13:37. March 13, 2017. <https://www.youtube.com/watch?v=ewU7Vb9ToXg&t=1781s>
- (25) – “Hamartia,” *Wikipedia* (Wikimedia Foundation, March 14, 2022), <https://en.wikipedia.org/wiki/Hamartia>.
- (26) – Aleksandr R. Lurija, *The Working Brain: An Introduction to Neuropsychology* (Basic Books, 1997).
- (27) – Alexandra Osika, “The Myelin Sheath and Myelination,” *Kenhub* (Kenhub, March 14, 2022), <https://www.kenhub.com/en/library/anatomy/the-myelin-sheath-and-myelination>.
- (28) – Joshua Waxenbaum, Reddy V, Varacallo M. *Anatomy, Autonomic Nervous System*. StatPearls. Treasure Island, Florida: StatPearls Publishing. January 2022. <https://www.ncbi.nlm.nih.gov/books/NBK539845/>
- (29) – Wim Hof, *Wim Hof Method: Activate Your Full Human Potential* (S.I.: SOUNDS TRUE, 2022).
- (30) – RSA. “Antifragile – Nassim Nicholas Taleb”. YouTube Video. 19:19. January 9, 2013. <https://www.youtube.com/watch?v=k4MhC5tcEvo>
- (31) – Duke University Department of Political Science. ““Two incompatible sacred values in American universities” Jon Haidt, Hayek Lecture Series”. YouTube Video. 1:06:22. October 15, 2016. <https://www.youtube.com/watch?v=Gatn5ameRr8>
- (32) – Ibid.

- (33) – Jordan B. Peterson, *Maps of Meaning* (S.I.: Taylor and Francis, 2002).
- (34) – Hof. “The Wim Hof Method”. (2020), pp. 59–65.
- (35) – James Clear, *Atomic Habits: An Easy & Proven Way to Build Good Habits & Break Bad Ones* (Penguin Random House, 2018).
- (36) – Malcolm Gladwell, *The Tipping Point* (London: Abacus, 2013).
- (37) – Gehl, *Life Between Buildings: Using Public Space*. 2011.

03 The Specialization

Of our Tools and Cultural Normalcies

“But when it came to writing, Theuth declared, “Here is an accomplishment, my lord the King, which will improve both the wisdom and the memory of the Egyptians” ... To this, Thamus replied... “the discoverer of an art is not the best judge of the good or harm which will accrue to those who practice it... Those who acquire it will cease to exercise their memory and become forgetful; they will rely on writing to bring things to their remembrance by external signs instead of by their own internal resources. What you have discovered is a receipt for recollection, not for memory. As for wisdom, your pupils will have a reputation for it without the reality: they will receive a quantity of information without proper instruction, and in consequence be thought very knowledgeable when they are for the most part quite ignorant.”

Plato – Phaedrus^[1]

We need technology to live just as we need food to live. However, if we eat too much food, or food lacking in nutritional sustenance or value, or even food whose been spoiled or poisoned – we turn a means of survival into its opposite. Technology is quite the same. It has in many ways run rampant in its recent development, radically altering our perception of normal behaviour and our ability to partake in certain behaviours at all – all while dramatically altering our common social and communal rituals. Our brains perceive tools quite literally as an extension of the body^[2], so in some essence, we are what tools we use. With more abstract tools, there lies a greater responsibility for understanding how we embody it for use, given the greater impacts it can have on our perception of reality. For example, a map distills real world sensorial inputs in sight and the nuanced interaction between the body and the other senses in movement and wayfinding down to a simple 2-D point on a paper plane. Time perception while using a clock might excuse the need for a more nuanced understanding of how the rhythms and cycles of the natural world speak to one another. These intricate tools have a deep effect on how we perceive reality, whether we realize it or not. This is not to say there are not tangible benefits in their use, rather that with each new input is a potential loss.

“Technological change is neither additive nor subtractive – rather it is an ecological impetus. One significant change generates total change. If you remove the caterpillars from a given habitat, you are not left with the same environment minus caterpillars: you have a new environment, and you have reconstituted the conditions of survival... this is how the ecology of media works as well. A new technology does not add or subtract something. It changes everything^[3].”



Figure 17 – Technological Imposition

The introduction of new specializations through our technology has created an increasing number of experts in a greater number of domains. These experts create more sources of information in a more distilled form (take for example the normalcy of cell-phones – a tool that creates an immediacy in access to both other people and information). Specialization is by no means an enemy, rather it is an immensely useful action.

By specializing in a field, your vision narrows but becomes more high resolution – in this resolution we can reach something of a threshold, from where we can make intuitive links between other patterns in the environment we have explored or are exploring and the information we have already embodied. One example I always enjoy reading about this is that of the Polynesian Wayfinders as Wade Davis describes in his book *The Wayfinders*^[4]. Davis speaks about how the Polynesian culture made its way across the Pacific Ocean to substantiate cross-island and cross-cultural trade at a time when the European seafarers observing and colonizing them did not possess the technology that could easily navigate them away from the shoreline they were sailing by. In specializing in a seafaring style dependent on the senses of a Wayfinder onboard, the Polynesians could read the environment: changes in cloud shape, texture and colour, pathways of certain birds, the salinity of the water, the quality of light around the moon, the patterns of the waves bouncing off nearby island groups – by specializing themselves within the sensorial domains of their environment, using the body and its senses as the primary tool for seafaring, the Polynesian cultures, and many other vernacular cultures, could begin to make subtle connections to the nuance of their surrounding environments that would allow them to both synthesize with and survive these environments. Later technological breakthroughs would also allow the Spanish and other colonizing nations to do similar, but with a different focus^[5]. Again, what we see and what tools we use dramatically affect the ways in which we perceive the world around us. So while technological and occupational specialization has done wonders in raising our perceived standards of living – it has done so through a certain frame that leaves a deeper sensorial connection to the surrounding ecology at the periphery for most, and has created a set of material standards that lacks cohesion with the surrounding environments and our bodies role within them – leading to many of the issues in mismatch disease our culture faces today.

Cognitive thought and eventual expertise is not an issue in anyway, and yet we can often be caught up in the process of thought and information gathering without having a thorough applicable knowledge of it. In a set of information inherited from a source foreign to physical experience, let's say the internet, there might not exist a motor framework in the body yet that can act out or properly embody such information, because the means by which you consumed it were not fully physical in nature. This alludes back to Piaget's point that the learning comes from the motor level up^[6], taking small actionable movements from sensory stimulus and turning them into real world interactions, as it is these real-world interactions that allow for all of the body to have an input into the formation of the experience. Rogers cites this as **behavioural incongruence** – we have learned the information through educative exposure, but often lack the motor habits to act that information out^[7]. In essence, you become what you choose to act out. All of this points to the need for a culture and an educational system considerate of the importance of physical health in the formation of cognitive health. Health then is very much a “social contagion”, in that the normalization of behaviour from those that surround us will ultimately have an influence on the standards we hold ourselves to. This was made evident in a study that found that if a close friend became obese, your own chances of becoming obese went up 57%. If it was a family member, it went to 71%. Among mutual friends or family members (more than one), the effect is even stronger, with chances increasing 171%^[8]. The behaviours and variables that might lead to such conditions become more accessible when you're surrounded by others that accept such conditions and perpetuate them through easier access to resources or behaviours that produce such outcomes. In order then to create better living environments with the information we do have about how we ought to behave, we need to create spaces and places by which people can voluntarily act these actions out in a convenient and consistent manner.

Many of the issues we see in our negligence of body, community and environment today might be best tended to by encouraging the individual to go out and use their body as a vessel to test

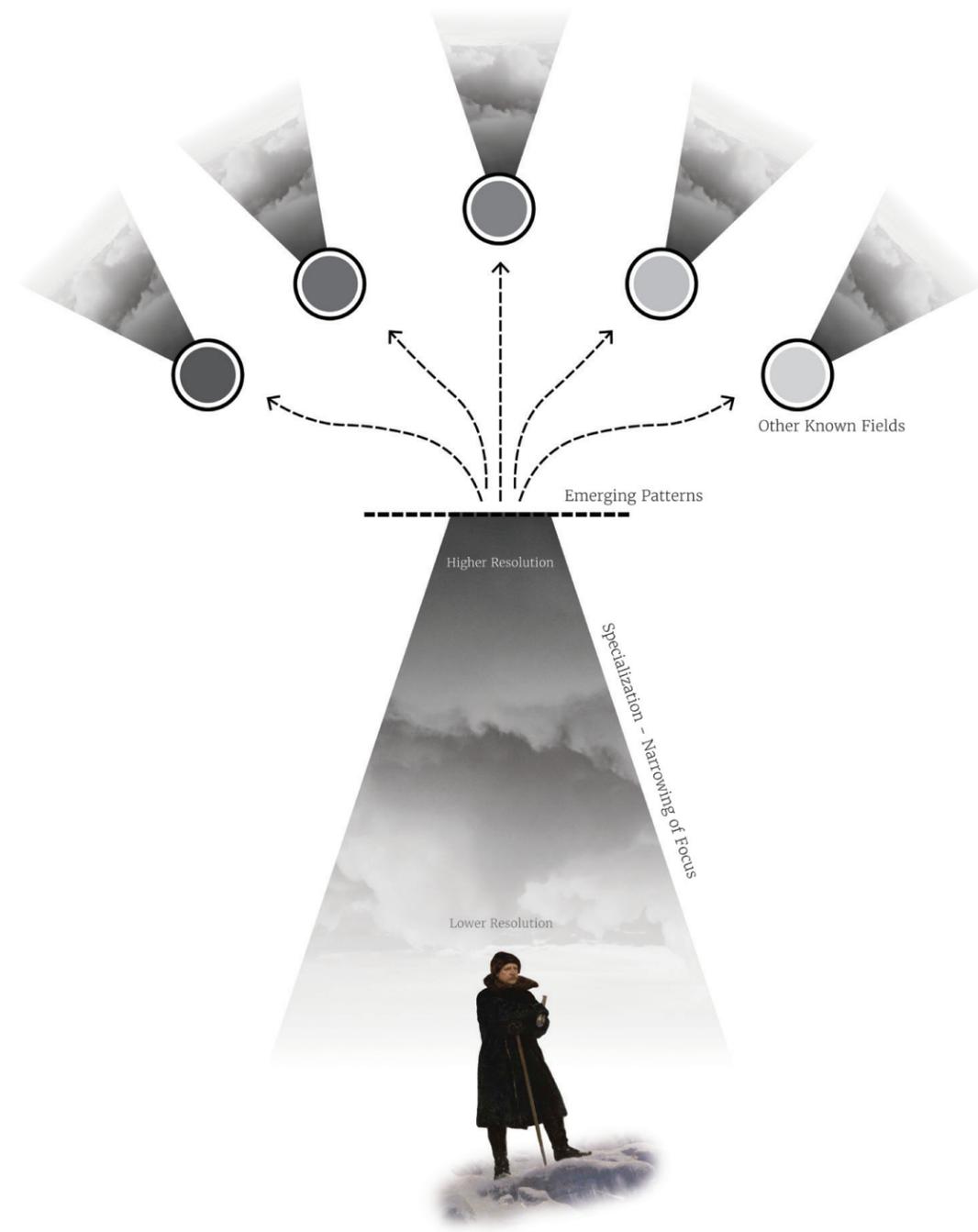


Figure 18 – Specialization

information and create behaviours with real-world impetus to back up such experiences, rather than focusing on cognitive or mono-sensory centric (digital media is heavily dominated by sight and sound) understanding alone^[9]. This is especially important when there is so much information available, and so many niche avenues by which we might behave with that information, that we may clog our limited field of perception and lose focus of the basic responsibilities in bodily care that we should be capable of tending to, especially in a time where so many of our basic necessities are cared for as a baseline.

Of our Urban Life

The 2002 documentary ‘Tokyo Noise’ visually and aurally represents both the sensorial oppression and overflow a fast-paced urban lifestyle can have on the individual – exemplified by the mass pollution of frantic movement seen within the densely populated supercity of Tokyo^[10]. In the film, Psychiatrist Dr. Sumioka states:

“In big city life, Japanese people grow ever more lonely – and they lead an incredibly autistic life. The information they get when sitting in their rooms in front of their screens is the basis of all their thoughts and values. If this continues, in the future everything will be about information, and the reality you’ve created in your mind will come alive^[11].”

In essence, Dr. Sumioka is stating that in the movement away from a physically bound existence into one where cognitive stress and exploration is given much more merit in the educational, occupational and social workspaces, we run the risk of augmenting our mental reality from its physical surroundings, into a condition determined by the information we are being fed. Rather than falling back on a set of motions and their attached sensorial planes in the formation of ideals, that is to say deriving value from doing, digital media presents an opportunity where one can become a bystander to the realities of the world by placing themselves within a world they create for themselves. This augmentation from reality is without a doubt a cause for social turmoil in my own opinion, as the lack of stressful exposure to the environments that surround us might lead to these conditions becoming ever more foreign and uncomfortable, which could serve as the justification for many to dive further into the realm of their personally formulated and self-centred reality through digital media. Jung stated that *“Retreat from life leads to regression, and regression heightens resistance to life^[12].”* A certain perceptive view of the world, one that may limit our exposure to the stresses present within it as a baseline, will inevitably heighten the resistance one has to face in attempting to re-engage with the stresses or to reorient their frame of perception entirely. Once a situation takes on mass, it becomes much easier for said mass to grow further. Again, in Tokyo Noise, Photographer Araki describes the urban life as a place:

“filled with impulses, obstacles and loads of unhealthy stuff. Those things exist in abundance in Tokyo, you really feel you’re alive there^[13].”

We can easily take on more antisocial behaviours in our lifestyle (described by Dr. Sumioka) without sufficient challenge or awareness of our separation. The vast number of people in a city, and our limited ability to see and process information around us, means that the urban dweller can become cold to an extent to those outside of their circle. You might rarely see as many people in city streets waving and saying hello to passersby as you might find in a small village with few people, as I myself have experienced living in both. In addition, the sheer barrage of information and stimulus in the public realm often gives little opportunity for the deduction of the long-term impact of such an action, given again, our limitations in the number of things we can perceive and focus on at any given time. This makes an urban lifestyle a unique challenge of first-person experiential learning, if the participant is willing to challenge themselves in confronting stimulus outside of whatever the present standards are that they have grown into, while also willing to be aware of the hyperstimulants and the impulsivity such stimulants can create in an environment where there is generally much easier access to them, they can find ways in which their mind and body can be sufficiently trained in their

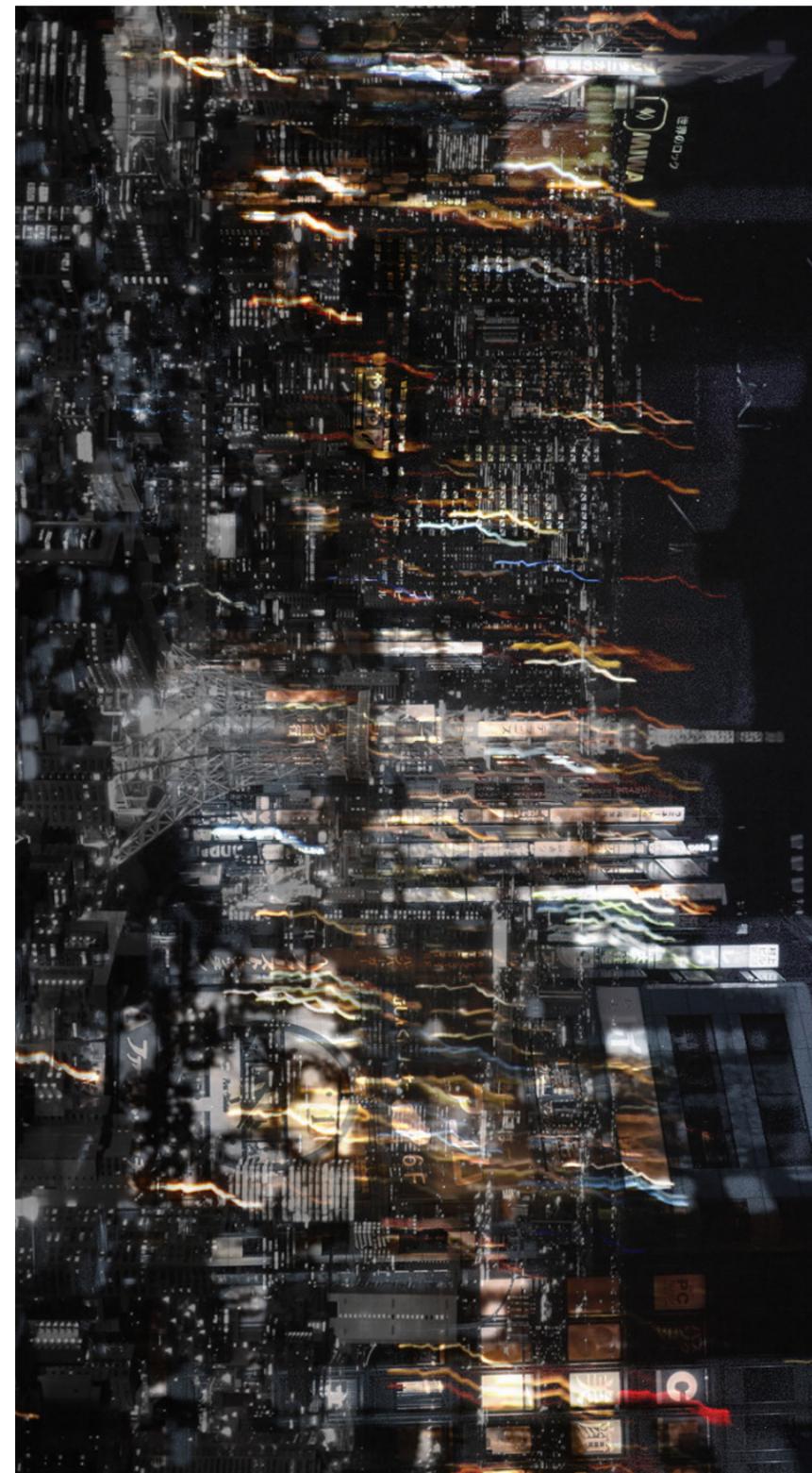


Figure 19 – Tokyo Noise

own lifestyle. Providing adequate infrastructure to act proper habits out in a convenient manner is all the more important then in urban spaces where many different stimulants are constantly vying for our attention. I feel it important to end this section on this thought,

“New technologies alter the structure of our interests: the things we think about. They alter the character of our symbols: the things we think with. And they alter the nature of community: the arena in which thoughts develop^[14].”

Of Bathing

Bathing... is concerned with the care of the body. To maintain the balance of this delicate instrument, to dwell in harmony with our organism, is a prime necessity of life... The role that bathing plays within a culture reveals the culture’s attitude toward human relaxation. It is a measure of how far individual well-being is regarded as an indispensable part of community life... This is a social problem. Should society assume responsibility for guarding health and promoting well-being, or is this a private matter?

Gideon – Mechanization Takes Command^[15]

Most bathing rituals started very simply in their scope, often taking advantage of the existing environmental characteristics such as hot springs, rivers, lakes or the ocean and building simple structures to make both access and social discourse possible for the people around it^[16]. These bathing rituals spread organically, and evolved as they came into contact with other cultures throughout time. Geography, population density and culture all played in to the evolution of local bathing principles. In the European context, the Reformation and Counter Reformation in Europe made way to a conservatism that regarded nakedness as a sin in any public domain^[17]. This stunted the growth of public bathing in Europe, as many of these spaces became symbols of sexual immorality, leading to a general lack of cleanliness amongst many citizens without a reliable access to water to bathe in. Once nations began industrializing, with many of the European countries at the forefront of this technological revolution, the need for hygiene was highlighted amongst the rapidly growing urban centres – who were facing a massive uptick in both population and pollution. From this, bathing became a means of mechanized medicine, using industrial production to create more standardized means of bathing that would be more economically affordable and accessible to the masses^[18].

The privatization of the modern bath was a consequence of the growth of the city through the economy of scale provided by industry^[19]. As cities and our technological and medical understandings grew, the reinvention of the home into a mechanized and controlled environment became both accessible and purposeful in treating past problems such as tuberculosis. Water became more accessible in urban areas through increasingly sophisticated road and energy infrastructure. Homes became elements of mass-production, creating standardized parts in the mechanized units that would define the layout of the typical home (notably in the standardization of the ‘wet-rooms’ in kitchen, bath and laundry)^[20]. City layouts became more permanent as more hard infrastructure was built to support them. And time arguably became more commodified as economic values became more intertwined with materialist fulfillments.

These standards were created in response to the growing market of consumerism, highlighting how well off one was based off of what objects they owned and had access to. This culture carried forward into the next century, where WWII provided the perfect industrial slate from which to provide people access to many new mechanized objects, altering the baseline standards in a rapidly mechanizing home typology. The suburban standard as we know it was cemented, and so the normalcy of a standard bathroom was created for a generation of young people growing up in sprouting plots of suburban homes, urban apartment complexes, or other retrofitted or renovated variants of the now typical home. Here, bathing opportunities are limited to a machine-like process. Water comes available through pipes and faucets that do not expose the original source. The tub concentrates both prone and standing bathing into one oft single-user space, where a curtain is often used to



Figure 20 – The Bathing Pool

create privacy and to keep water isolated. Windows or exposure to the outdoors are often limited to preserve privacy further. The act of bathing has been concentrated and confined to a standardized cell, limiting its potential for new experience, while also limiting the ability to garner a meaningful critique for its acceptance as the standard way of bathing given its general monopoly on how most of us bathe, and thus how we perceive the role, potential and perception of bathing.

My point in moving from the broader culture, to the city and down to a specific daily action in bathing in this section is to argue that the mundanities we partake in through everyday life are outstandingly important in the determination of broader cultural ideals and normalcies. If we stretch our cultural “supply chains” through the swift adoption of technologies that alter our root motor behaviours while we ourselves take on more and more specialized occupations, we may introduce too much chaos in the culture, limiting the options by which we can tether ourselves together for communal and social understanding. Bathing as a basic necessity, and the social and ritual traditions that have been time-tested and are still acted out around bathing in many cultures still today, provide an opportunity to act as a solid tether by which people can fundamentally relate to one another in a communal setting.

From this we can make the argument that this concentration of bathing has come at the cost of several things. Environmentally, we have gone from bathing with the elements in the small human interventions into otherwise “wild” water sources to one determined purely by preconceived internal climatizations. Just as the common understanding of water can be lost when it is provided to us so conveniently, so too there is a loss in the wild water of which we once inhabited. Hardscapes in cities are often negligent of the natural movement of water and its impact on broader ecological processes downstream. These concerns aside, even just taking time to undertake self-care is outstandingly important, and should be made important by challenging the standard practice of background mundanities like bathing, made a background activity by the ways in which we currently build.

Endnotes:

- (1) – Neil Postman, “The Judgement of Thamus,” in *Technopoly* (New York: Alfred A. Knopf, 1991), p. 4.
- (2) – Thomas Carlson et al. “Rapid assimilation of external objects into the body schema.” *Psychological science* vol. 21,7 (2010): 1000-5. doi:10.1177/0956797610371962
- (3) – Neil Postman. *Technopoly*. (1991), p. 18.
- (4) – Wade Davis, *Wayfinders* (House Of Anansi, 2009).
- (5) – Ibid.
- (6) – Sprouts. “Piaget’s Theory of Cognitive Development”. YouTube Video. 6:55. August 1, 2018. <https://www.youtube.com/watch?v=IhcgYgx7aAA>
- (7) – Carl R. Rogers, “The Necessary and Sufficient Conditions of Therapeutic Personality Change.,” *Journal of Consulting Psychology* 21, no. 2 (1957): pp. 95-103, <https://doi.org/10.1037/h0045357>.
- (8) – Nicholas A. Christakis and James H. Fowler, “The Spread of Obesity in a Large Social Network over 32 Years,” *New England Journal of Medicine* 357, no. 4 (2007): pp. 370-379, <https://doi.org/10.1056/nejmsa066082>.
- (9) – Juhani Pallasmaa, *The Eyes of the Skin* (Chichester: Wiley, 1996).
- (10) – Tokyo Noise, 2002. https://www.youtube.com/watch?v=ga6ZwfsS1cA&t=2s&ab_channel=2IOI2.
- (11) – Ibid.
- (12) – C. G. Jung, *The Theory of Psychoanalysis* (Charleston, SC: Forgotten Books, 2012).
- (13) – Tokyo Noise, 2002.
- (14) – Neil Postman, “The Judgement of Thamus,” in *Technopoly* (New York: Alfred A. Knopf, 1991), p. 20.
- (15) – Siegfried Giedion, “Mechanization of the Bathroom,” in *Mechanization Takes Command* (New York: O.U.P., 1948).
- (16) – Christie Pearson, *The Architecture of Bathing: Body, Landscape, Art* (Cambridge, MA: The MIT Press, 2020).
- (17) – Giedion, “Mechanization of the Bathroom,” in *Mechanization Takes Command*. 1948.
- (18) – Ibid.
- (19) – Ibid.
- (20) – Ibid.

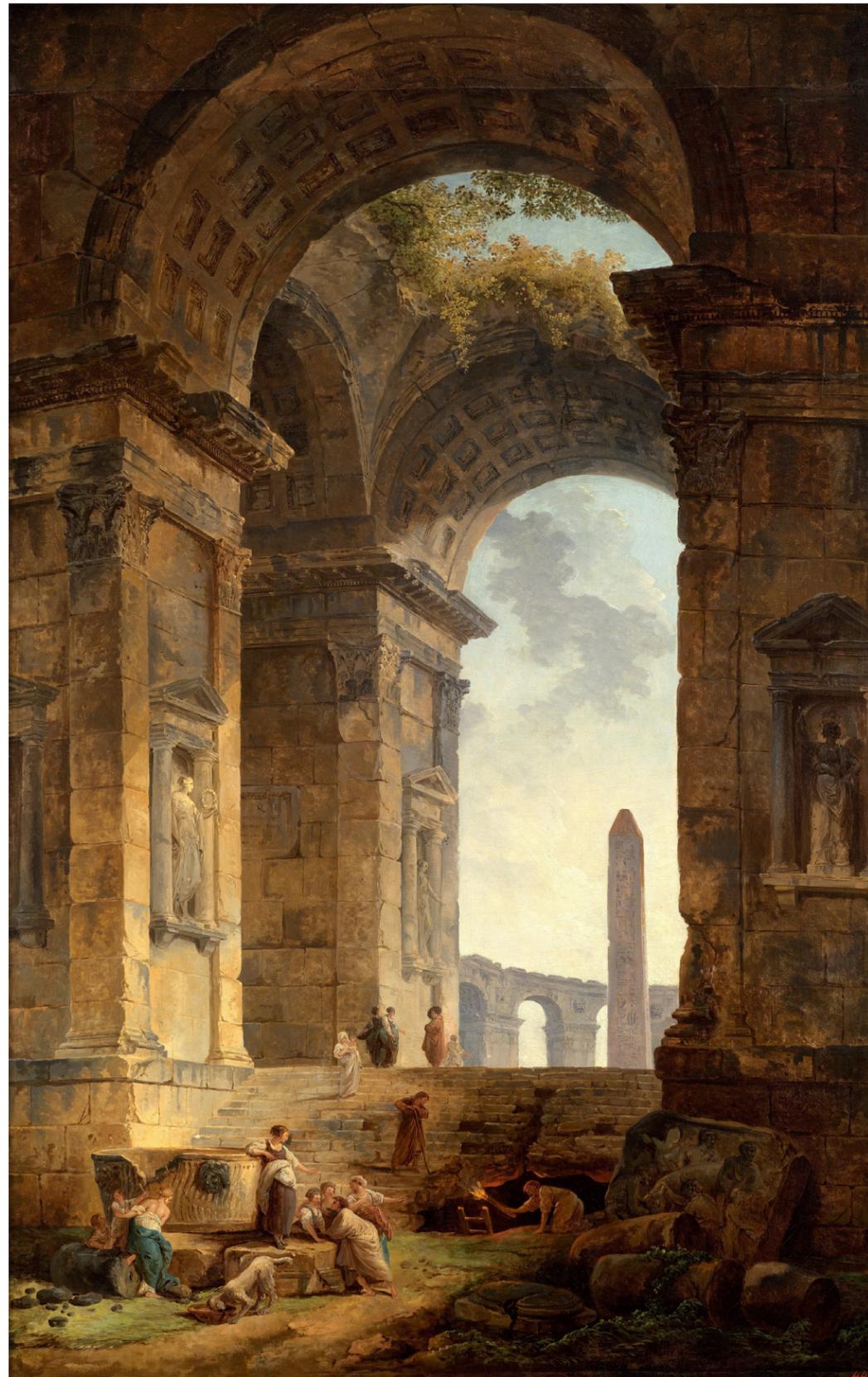


Figure 21 – Ruins with an Obelisk in the Distance

04 Rituals and Contrasts

What is a Ritual?

The mentally healthy individual is he who habitually calls upon fairly deep levels of vital reserves. An individual whose mind is allowed to become dormant – so that only the surface is disturbed – begins to suffer from ‘circulation problems’. Neurosis is the feeling of being cut off from your own powers.

Colin Wilson, New Pathways in Psychology^[1]

A **ritual** is a series of actions following a prescribed order – to reach a desired effect. We can look at rituals as ‘games’ to some extent. Quite literally, taking part in the ‘games’ that we socially subjugate ourselves to through sets of rules and guidelines is ultimately a means of sharing deep and meaningful experiences between the body, both individually and collectively, and the history of the place the ‘game’ takes part in. Jean Piaget, in his idea of **equilibrated states**^[2], suggests that we in our social rituals are attempting to find a game that everyone is willing to play that can be played in an iterative manner and not degenerate, rather become a better and better game throughout time^[3]. Peterson suggests that this pathway is reached through the phenomenology of meaning, understanding that there is a purpose to such a system beyond its benefits to you alone^[4].

There has been further research that indicates that ritual action acts as a means of physiologically connecting us together as a team. In the small Spanish town of San Pedro Manrique, a fire is burned annually to create a bed of coals for firewalkers to move across. The oak wood that makes up the heated coals reaches temperatures of 700° C (1200° F) – and firewalkers run barefoot across this bed of singeing coals carrying a relative or a friend on their back. Residents of the village say that the ritual was integral to the formation of their identity as a community, and the research found that there was a tremendous degree of emotional alignment among community members involved – which extended even beyond the performers to those that were watching. People displayed the same synchronization effect in heart rate spikes as the performers as they were running across the extremely hot coals (although to lesser peaks comparatively), suggesting an emotional and physiological projection that drew everyone into the ritual together^[5].

Pain is often the most effective aligner among a group because it pushes us into the extremes of contrasting states, helping us learn much quicker by moving us beyond our perceived tolerances together. Dimitris Xygalatas and his team found in research that voluntary exposure to pain acted as a stimulus to later pro-social behaviours^[6]. Extreme contrasts in emotional and sensorial stressors, seen in his case study of a nail walking and skin puncturing ritual from the Marathi in Mauritius, saw an increase in voluntary donations to charity, but also saw a relative decrease in associated

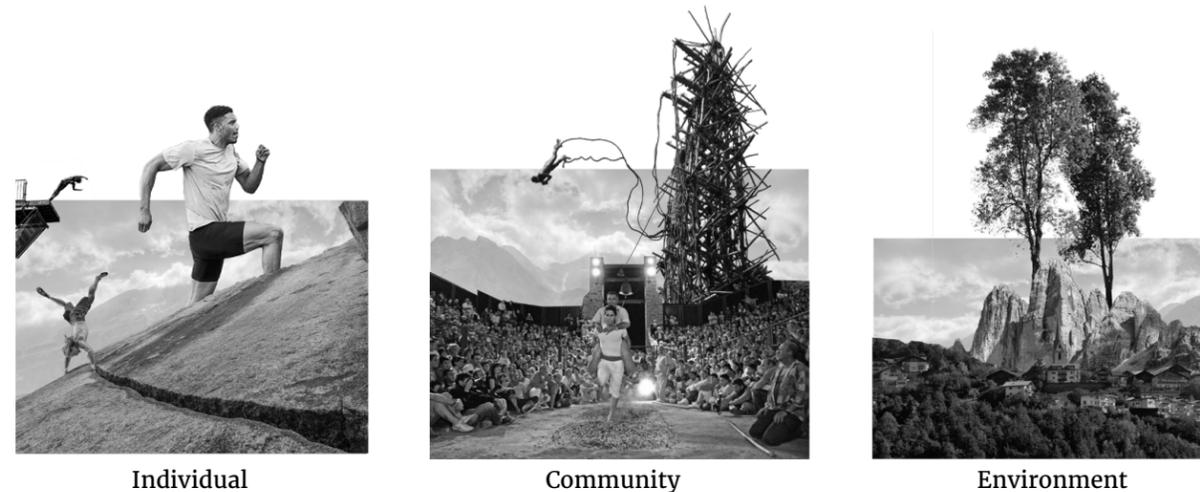


Figure 22 – Ritual Sequencing

Bridge Between These

stress from other stressful events the participants faced after the event had concluded. What this suggests is that empathy is heightened when you can relate to the stress of the other, while the voluntary exposure to these extremes act to alter your perception of what is actually emotionally and physically stressful later on^[7]. Again, the concept of antifragility arises. Stress acts as the means of making a system stronger should it be confronted, and pain, which can be categorized as any stressful exposure to that which you are not yet comfortable, acts as the primary means of reaching this. This is not to suggest that seeking out extremes is a constant necessity for everyone, rather that fundamentally we are creatures that need challenges to grow, and in the absence of sufficient challenge we risk losing our ability to empathetically connect to those around us. I think this is best exemplified in the locally distinct, yet broadly similar bathing rituals we can see globally.

Global Bathing Rituals

Bathing rituals can only take on the depth of meaningful ritual practice if they engage the bather to do so. Most **recreational activity**, that is activity that is not perceived as a baseline requirement to the functional operation of a persons' day-to-day life, occurs where conditions are favourable to the perception of the participant^[8]. This means that access to social and environmental stimulus alongside a diverse ancillary infrastructure can act as a means of pushing people to redefine their conditions surrounding necessity. We cannot expect people to change their perceptions surrounding bathing if they are stuck in a space that restricts their potential to do so – and yet in realizing the massive potential in public bathing to create meaningful stimulus for the city dweller, we continue to build private bathing infrastructure that instead makes the act of bathing a quick and dull routine for most people compared to what it could do.

The bathhouse instead embodies rituals with greater environmental, social and sensorial depths. Anthropologist Arnold van Gennep articulates **three stages to ritual**: separation, where the ritual occurs in space and time as apart from ordered society; transition, a limbo or between state; and incorporation, a return to stability with a new status or outlook^[9]. We strip ourselves of the clothes we wear once we enter the realm of the bathhouse, revealing the nude or near-nude form which each of us shares. Here, the signs of social status and persona are removed, putting all bathers on equal terms to take part in the immersion. Removing the often-guarded behaviour we bear in the social hierarchies of the outer world, the bathers reach new states of understanding of one's own body – and this often occurs through the social encouragement incurred by having other people take part in the ritual with you^[10].

Banya and Sauna

In the Russian Banya or the locally similar Finnish Sauna, people share a darkened room with a central heating fixture that is catered to. Traditionally this would be a fire, requiring tending to keep it alive while not overheating or smoking the room if proper ventilation is not available. This fireplace heats a pit of stones placed on top of the stove. A bucket of water could be dumped onto these stones to produce a cloak of steam that concentrates at the top of the room. As you climatize to the conditions of the lower-level seating, you move upwards to benches close to the ceiling, exposing you to the hot, humid cloud of steam in its full capacity. The capillaries in the body expand, bringing blood to the surface of the skin and opening the pores so sweat pools out. The time spent in this place could be a matter of minutes to a matter of hours, dependent on the climatization of the participant. When needed, a break is taken. You go outside, and given the annual climate of Finland and Russia, you would often be confronted with the contrast of a sea of cold white snow and frozen waters^[11]. Viherjuuri a historian of the sauna, quotes an 18th century traveler from Italy who encountered some Finns after a sauna:

“In winter they often go out completely naked and roll themselves in the snow [or douse themselves in the frozen lakes], while the temperature is 40 or 50 degrees below zero. They wander naked in the open air,

talking to each other and even with a chance passerby. If a traveler in search of help happens to arrive in a remote village at the time when all the inhabitants are in the sauna, they will leave the bathhouse in order to harness or unharness a horse, to fetch hay, or to do anything else without ever thinking of putting any clothes on. Meanwhile the traveler, although enveloped in a fur coat, is stiff with cold, and does not dare to take off his gloves. What astonishes the people of our climate most is that no ill effects ensue from this sudden change of temperature. People who live in warmer climates on the other hand, are liable to get rheumatism even when the most gentle wind blows^[12].”

Upon returning to the Sauna, you might opt to have yourself hit with birch whisks by other bathers^[13]. The smack and sting of the birch branches brings blood to the surface of the skin and clears the mind, its focus becoming honed to the conditions of the present. The conditions in the sauna can now become more extreme in both heat and humidity, as the bathers have climatized themselves to the extremes of opposing conditions. Vujosevic describes these spaces as a source of ‘universal cure and masochist pleasure’ because of the transcendence they fostered through “painful” contrasts^[14]. The bathers are placed into a state of “limbo”, moving between contrasts in light, temperature, humidity, scale, breath. Each bather comes out transformed, more able to understand and confront such stimulations voluntarily – strengthening their understanding of their own bodily capabilities.

Onsen and Sento

For many in Japan, bathing is more than a bath. It is akin to a sacred meditative practice – a carefully controlled ritual time to renew, revive, relax, and cleanse the body and soul. With ample industrial and mechanical infrastructure, most homes are equipped with the bathing equipment we find standard practice in Western countries, however, even in such a technologically gifted culture, public bathing infrastructure still exist in the form of Sento and Onsen. Their ritualistic value arguably spawned from their sacred significance, where early Buddhist influences in the idea of ablution (similar to baptism) became synonymous with the act of cleansing one’s own body in the natural hot springs of the early outdoor Onsen baths^[15].

Onsen are baths located at their natural sources, supplying waters from deep reservoirs heated from geothermal sources. Sento are indoor environments that often use latent heat from these geothermal supplies to heat tap-water being used in the interior spaces. The Onsen then is often an activity associated with more rural developments, an opportunity to separate oneself from what has become the bustling metropolis’ of Japan’s larger city centres while rooting oneself in the spirit of the surroundings^[16]. The Sento is a more urban phenomena, once fulfilling the need of providing water and hygienic infrastructure for growing urban populous’ but now taking on more of a role as a communal space from which the play of inherited rituals can be acted out in unison with those also in attendance^[17].

While in many earlier traditional scenes the bathhouse might not have been segregated, The modern bathhouse layout generally splits genders into two zones that run the length of the building. These two zones allow for a worker, who tends to the baths, watches over the bathers, and collects payments at the entryway, to oversee the operation. In other bathhouses, the layout might not allow for this, especially in Onsen who often form themselves to the natural water sources that surround them. A dry changing room with lockers greets the visitor, and sliding screen or glass doors bear the threshold between the dry space of the changing area and the wet spaces of the baths. You might bring with you a small towelette to cover your privates as you move between baths, or to drape over your face if you are less inclined to talk. You enter nude into a segregated bathing area, sit at a sink with a kakeyu bucket, and cleanse the body before you enter the soaking baths. To skip the step of cleansing oneself would be seen as a moment of social faux pas, while the hierarchical nature of the outer culture is loosened in a nude bathing space, one still has to realize that their behaviours have a direct effect on the experiences of those surrounding them. Cleansing is integral to keeping the communal baths clean and hygienic, and contributes to the sense of ritual seen in these spaces. Next, one enters an introductory bath to soak. Here you cleanse yourself further, ensuring that the dirt of

the body does not reach the baths further on, but it also acts as a means of climatizing the body to the upcoming heat, allowing you to experience the baths in some form of relative ease rather than the extreme pain you might face if your body is not properly prepared for such a shock.

You might typically sit to relax or talk quietly with others while working yourself up into baths of higher and higher temperatures. Each of these baths is typically located in proximity to the next, making the transition less disturbing in the often-quiet environment the Japanese bathhouse evokes. In the Sento, a controlled interior condition, the baths range from a temperate 32 Celsius up to a near scalding 43 Celsius (110 F)^[18]. In the exterior conditions of the Onsen, volcanically heated water swells can make water even hotter – requiring the users to start at a lower, yet still warm temperature to climatize the body to such extremes. These spaces evoke a sense of place – a connection to the immediate environment, either through literal physical placement in the outdoors or through allusions to environmental monuments through art, seen in the consistent reference to Mt. Fuji in the wall art of Tokyo Sento^[19]. Here contrasts in environmental conditions enhance the connections between mind and body, as elements like rain, sunlight, snow, air temperature, humidity, moving water bodies and the presence of other beings, be they animal or plant, enhance the sensorial experience. Here it becomes quite evident the inherent sacredness of the rituals that encompass the movements through these baths – a deep respect for the surroundings is catered to in these places that were derived both from the Buddhist ideals of ablution, but also from the Shinto belief that a spirits inhabit different parts of the environment, and so deserve the respect from your behaviour^[20].

Hamam

The Turkish Hamam is a space influenced heavily by the region and religions from which it grew, which have heavily influenced both the rituals and the architectural features of such spaces. The traditional hammams were often annexed to Mosque’s and their bathing processes acted as places to perform ablution (ritual cleansing) before partaking in prayer^[21]. Because of this these spaces took on the architectural features typical to the vast religious history of the region, primarily influenced by Islamic beliefs of the Ottoman Empire and the earlier Byzantine Christianity. As such, these places were gender segregated, which allowed for the performance of fairly physical cleansing methods between bathers and bath workers^[22].

You begin by moving into a hot chamber that opens the pores and coats the body in a blanket of sweat. This process not only loosens the pores to allow for easier cleansing, but also relaxes the muscles to prepare them for massage. Bathers typically move through chambers of increasing heat and moisture, where saunas are punctuated by breaks to cleanse the skin through massage^[23]. The skin is first cleansed with water and a bucket before a masseuse begins to scrub the body. A central “table” acts as the place where the bathers lay while the workers work to cleanse their body. A cloth tied to the hand is scrubbed over every surface of skin on the body – lifting dead skin and body oil from the surface of the skin to remove the dirt, sweat and dust built up on the skin from the outer world. The cleansing is followed by a massage, where foam is applied to the body to rejuvenate the skin, while the masseuse rubs down the different muscle groups of the body to release pent up strain. Slapping acts as a means of bringing blood to the surface of the skin, allowing the skin to rejuvenate and heal itself more quickly, while also making the bather much more aware of the differences in temperature, moisture and atmosphere in the space^[24].

The process of the Hamam can be anywhere from a short cleanse between other activities or a long-drawn process to encompass the day. The attendant that cleanses you will only stay by your side for about 30–45 minutes depending on what services you paid for, or the busyness of the baths at that time^[25]. While the process can be short, it is not meant to feel quick. The lobby often has seating where you can relax and drink herbal teas to pass the time and cool off. The atmosphere of the space changes slowly as the elements outside change. In many notable Hamam’s, a dome punctured with window wells dapples the steam gathering at the rounded roof – diluting the light entering and



Figure 23 – Russkaia bania (Russian Banya)

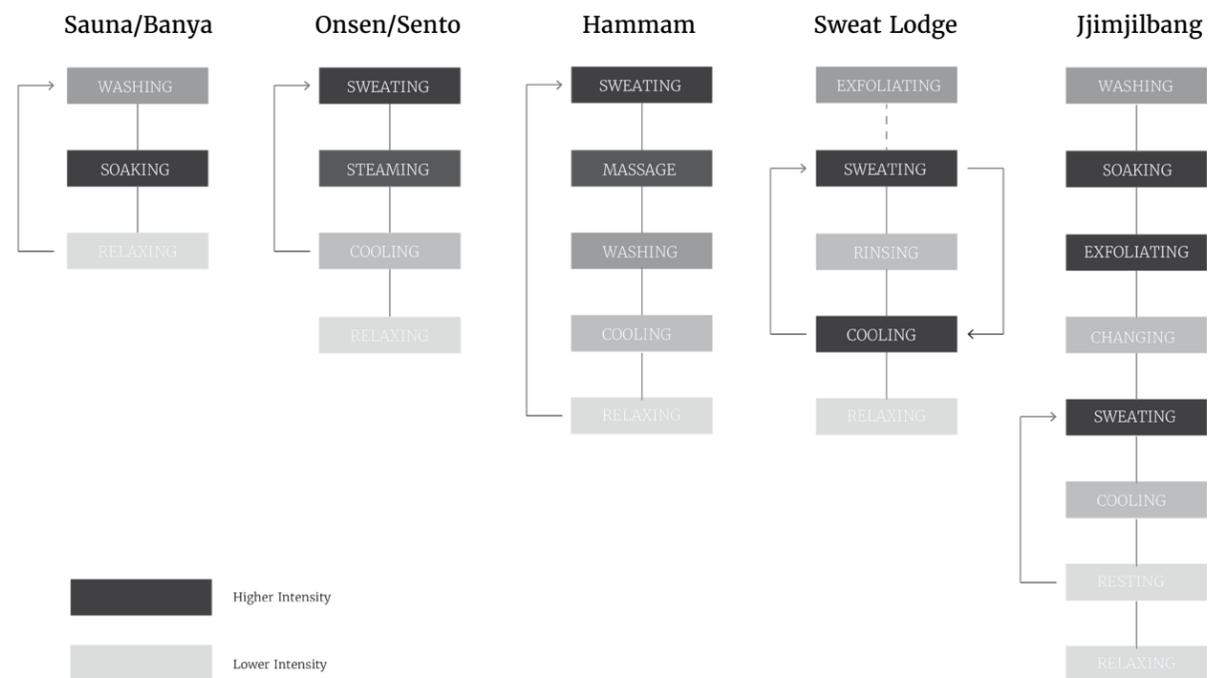


Figure 24 – Ritual Movements

calming the space. The mass of the structure is felt in these spaces, designed as such to retain the heat of the bath to preserve energy and to provide little distraction to the ritual choreography taking place inside^[26].

Mogyoktang and Jjimjilbang

The Korean Mogyoktang is a simple bathing structure fitted with showers and baths. The infrastructure of these bathhouses, synonymous with the traditional bathing culture of Korea, were ever-present in the days prior to the rapid industrialization of the country, where shared bathing facilities were often needed in agrarian areas where most time and effort were spent catering to other tasks, and where heated water was not readily available^[27].

The modern Jjimjilbang are all encompassing spaces where one sweats, cools and rests – more adapted to urban lifestyles in its supply of an array of ancillary and staying activities to make the use of the bath more worthwhile. Upon entering the space, you will take your shoes off and place them into a locker next to the front door. Slippers are typically provided as to limit the spread of dirt in the spaces to help keep the facilities clean. You will give your shoe locker key, and payment for time you will be staying to a desk attendant, who gives you a locker key. Jjimjilbang have segregated bathing areas but collective commons, where guests wear a set of pajamas provided by the bathhouse^[28].

Upon entering the baths, one cleanses themselves at small basins (much like you would in the Japanese bathhouse's) – the baths are not meant to clean you, rather to relax the body and prime it. Baths ranging in temperatures from warm to very hot greet you after you clean yourself – and a hushed tone overcomes the space. Baths of different temperatures are followed by drying off in kiln rooms, an oven fueled by a fire – typically used for treating or drying material, adapted to the scale of a human. Here one lies on the floor in garb to exfoliate further through sweating. Here you lay amongst all the other bathers, transitioning between bath, shower, sweating and resting^[29].

Breaks are met with drinks in rooms for relaxing. These spaces are not nude and are open to both men and women. Each Jjimjilbang is different depending on its context, but it is typical to find these bathing spaces partnered with sleeping rooms, movie spaces, lounges or small dining and drinking areas^[30]. These spaces come to encompass the needs of the people who inhabit that area of the neighborhood or city, and so remain relevant in a Korean culture where self-care is very highly regarded.

Sweat Lodge

Inside the sweat lodge, a fire-keeper tends to a central fire and is in charge of adding stones to the lodge. The fire-keeper begins in placing seven rocks in a hole in the center of the lodge. This number is relevant to many Native North American cultures, particularly the Iroquois who held the seventh-generation principle, the idea that each action undertaken should consider its sustainability for the people and their environment seven generations from now^[31]. As the rocks are placed in the lodge, the participants may add sweet grass, cedar or tobacco to the stones. These are considered offerings.

In addition to the fire-keeper, there may be one or two other leaders who remain outside the sweat lodge to prevent people from entering during the sweat and to assist any participants who need help. Another person stands inside the door of the sweat lodge, and this person is in charge of maintaining etiquette while the sweat is in progress^[32].

The sweat is punctuated by chanting, drumming, humming or just silence – all intended to be used as methods to reach higher realms of bodily consciousness. After about 45 minutes, more hot stones will be added to the fire, while older stones are pulled to limit the amount of ash and smoke



Figure 25 – Icehole

in the air. Here, you can step out to grab some fresh air and cool down, readying yourself for another round^[33].

Meanings

In each of these cases, the thinking mind is at ease, feeling takes precedence. Periods of high intensity are contrasted by low intensity periods of rest and recovery, allowing for the preparation for another round – or a more sensorially intensive bath (i.e. higher heat). What makes these spaces successful is that they allow the individual to follow quick rituals to reach desired bodily effects through variable intensities, and then punctuate this by relaxed spaces where food, drink and socializing occurs before the next round.

These ritual punctuations between intensity and eased relaxation are actually at the core of learning. The zone of proximal development explains this well, essentially, we straddle the line between what is known and unknown in learning. To inhabit too much of the unknown risks error, injury or death depending on the ritual, and to inhabit too much of the known means stagnation and little challenge so little or no learning^[34]. What is perfect here is that although some things may be uncomfortable to someone who hasn't done them before, it is time that determines the challenge level. Getting used to one condition for a minute raises our tolerance so next time we may be able to do two. Priming the body by moving up or down in temperature slowly also functions to help ease the individual so that time can become the core factor for challenge rather than personal conviction. So it is important in these spaces to have a fluid interplay between relaxation and challenge. In embracing contrasting extremities, the body is essentially put into a voluntary state of survival, where the body adaptively responds to what it believes is danger, releasing adrenaline and the stimulation of anti-inflammatory compounds that help heal the body and make us feel great^[35].

Cold and heat are much like emotions. Emotion in the end is a biological stress within expressed through hormones. By going consciously into the cold or heat, one can learn to deal with the adrenaline, epinephrine, dopamine, serotonin, cannabinoids and the opioids that the body naturally produces as a natural response to stress^[36]. These typologies generally sway between these contrasts in temperature, light, room, privacy or exposure simply because these oppositions further engage the sensory systems by making the sensory qualities that come with such changes apparent to both the conscious and subconscious body. As we get more used to the repetition of the process and the transition between poles, with many of these bathing excursions occupying several hours at a time^[37], our body is placed into a state of limbo, where it learns and trains itself in how to react, and the participant begins to control their physiology with their own mind. Once finished, these bodily experiences are incorporated into the future performance of the body itself. These bathing experiences are fundamentally learning ones.

These contrasts work most effectively when placed close to each other with some form of movement dictating their perceived boundaries. Small movements like walking, shivering or clenching up serve as metabolic responses to extreme cold – means of preserving body heat while spreading as much heat to the extremities as the body can muster. Movement also acts as the primer for motor activity, firing neurons in the brain and priming the individual for learning^[38]. In having the extremes in close proximity, the availability of choice ensures that we can move from one to the other and maintain some semblance of a thermal balance. This gives the safety to fully enjoy both extremes without an intense health risk. We can be greatly overheated for a while in a sauna or a bath, and then completely chilled to the bone – all within close proximity to spaces that can balance us if we push ourselves too far.

Another reason for such proximity to contrasts is one of aesthetic. Heat is not a distance receptor, meaning we cannot sense something will be hot or cold until we are in close-proximity with it, unless there are clues in other sensorial domains that could categorize it as such. As such, placing these extremes in close proximity provides an acute and noticeable contrast to these sensory systems



Figure 26 – Fireplace in Lapland

that draws a more intense focus to the feeling that such changes promote within the body. The hot sands of the beach contrast to the cool ocean waters just as the cabin hearth provides an intense getaway from the blizzard outside. Extreme situations become much more bearable when their oppositions are placed alongside one another to allow people to quickly climatize.

It needs to be noted that these rituals function so well because they are inherently social. The typical privatized bath does not actively encourage us through social or environmental cues to push beyond what is merely comfortable, yet bathing remains one of the best unrealized opportunities to allow the average urban dweller to interact with these ‘hidden’ systems in the typical Canadian city, because bathing is so integral to human health. A more public source of bathing though would go a step further in realizing that social encouragement is an outstanding motivator in pursuing personal habit formation. Gladwell notes in his study of the spread of ideas that the “tipping point”, the point where an idea spreads like wildfire, is reached once a critical mass of people has been reached and the idea is “sticky” enough in that it evokes sensorial experience⁽³⁹⁾. Palasamaa cites the lack of complete sensorial experience as a fundamental loss in the potential of the city, with much of our experiences in such fast-paced urban environments given solely to the visual and auditory fields⁽⁴⁰⁾, but public bathing can act as a bridge that both caters to all the senses while being an inherently neutral experience in the social hierarchy. The reason why these experiences are not as commonplace as they should be is that they are inherently inconvenient in their challenging of the prescribed normalcies we have created for ourselves within our current bathing and infrastructural typologies. A public bathing typology acts as the ‘foot in the door’ for many people who would otherwise be ignorant of its potentials. This is the reason why, although global industrialization has created a typical urban bathing typology, these deep rooted, arguably sacred social bathing rituals still occupy our conscious interest.

The bathhouse can act as a contrast to the bustle of the city. Nesting the order of architecture within the realm of chaotic nature can serve to juxtapose and reorient our focus and perception to a different scale we may not have considered otherwise. The bathhouse in a park can act as a contrast to the bustle of the city, providing a space to slow down and unwind before or after a day of work, on a sunny weekend at the beach in the summer, after you finish a run or a sport, or in the cold of winter when the lake becomes a cool challenge to confront. The bathhouse is a space of immediate action. A space to act out the basic motor habits within the realm of bodily, social and environmental stimulus and challenge that will more readily allow us to maintain some sense of the much needed bodily autonomy that can be lost in the conveniences of mechanical dependence. The scope of these spaces is simple, the rituals simple, and the exposures apparent. Time and ecological atmosphere defines both the intensity and the mood of the space, so the architecture should reflect this and hone our focus into these elements.

Endnotes:

- (1) – Colin Wilson, *New Pathways in Psychology: Maslow and the Post-Freudian Revolution* (London: Victor Gollancz, 1979).
- (2) – Jordan B Peterson. “2015 Personality Lecture 05: Constructivism: Jean Piaget”. Youtube Video. 1:13:47. January 21, 2015. https://www.youtube.com/watch?v=ED_TfmwjsEw&ab_channel=JordanBPeterson
- (3) – Ibid.
- (4) – Ibid.
- (5) – TED. “The power of ritual | Dimitris Xygalatas | TEDxAthens”. YouTube Video. 17:30. April 1, 2016. https://www.youtube.com/watch?v=IrjCLvSQ_cw
- (6) – Ibid.
- (7) – Ibid.
- (8) – Jan Gehl, *Life Between Buildings: Using Public Space* (Washington, DC: Island Press, 2011), p. 11-13
- (9) – Christie Pearson, *The Architecture of Bathing: Body, Landscape, Art* (Cambridge, MA: The MIT Press, 2020). p. 265
- (10) – Ibid.
- (11) – Pearson, *The Architecture of Bathing: Body, Landscape, Art*. 2020. p. 309-330
- (12) – H. J. Viherjuuri, *Sauna: The Finnish Bath* (Greene, 1978).
- (13) – Pearson, *The Architecture of Bathing: Body, Landscape, Art*. 2020. p. 309-330
- (14) – Tijana Vujosevic, “The Soviet Banya and the Mass Production of Hygiene,” *Architectural Histories* 1, no. 1 (2013): p. 26, <https://doi.org/10.5334/ah.az>.
- (15) – Pearson, *The Architecture of Bathing: Body, Landscape, Art*. 2020. p. 331-354
- (16) – Ibid.
- (17) – Ibid.
- (18) – Ibid.
- (19) – Ibid.
- (20) – “Shinto,” Asia Society, accessed January 2, 2022, [https://asiasociety.org/education/shinto#:~:text=Shinto%20\(literally%20%E2%80%9Cthe%20way%20of,relation%20with%20the%20human%20inhabitants.](https://asiasociety.org/education/shinto#:~:text=Shinto%20(literally%20%E2%80%9Cthe%20way%20of,relation%20with%20the%20human%20inhabitants.)
- (21) – Pearson, *The Architecture of Bathing: Body, Landscape, Art*. 2020. p. 265-288
- (22) – Ibid.
- (23) – Ibid.
- (24) – Ibid.
- (25) – Ibid.
- (26) – Ibid.
- (27) – Pearson, *The Architecture of Bathing: Body, Landscape, Art*. 2020. p. 289-308
- (28) – Ibid.
- (29) – Ibid.
- (30) – Ibid.
- (31) – Pearson, *The Architecture of Bathing: Body, Landscape, Art*. 2020. p. 355-380
- (32) – Ibid.
- (33) – Ibid.
- (34) – Seth Chaiklin, “The Zone of Proximal Development in Vygotsky’s Analysis of Learning and Instruction,” *Vygotsky’s Educational Theory in Cultural Context*, 2003, pp. 39-64, <https://doi.org/10.1017/cbo9780511840975.004>.
- (35) – Wim Hof, *Wim Hof Method: Activate Your Full Human Potential* (S.L.: SOUNDS TRUE, 2022).
- (36) – Ibid.
- (37) – Pearson, *The Architecture of Bathing: Body, Landscape, Art*. 2020.
- (38) – TED. “Daniel Wolpert: The real reason for brains”. YouTube Video. 19:59. November 3, 2011. <https://www.youtube.com/watch?v=7s0CpRfyYp8&t=64s>
- (39) – Malcolm Gladwell, *The Tipping Point* (London: Abacus, 2013).
- (40) – Juhani Pallasmaa, *The Eyes of the Skin* (Chichester: Wiley, 1996).

05

Precedents

Serpentine Pavilion

Architect: Peter Zumthor

Location: Kensington Gardens, London, UK

Year: 2011

Zumthor's serpentine pavilion provides a focused and framed island within a broader park using a courtyard and orienting visitors around it. The building acts as an escape, a place where nature is framed, compressed and its sensory details expanded. Scents rise from the aromatic flowers, sound pours in from the tree canopies adjacent picking up wind and birdsongs, the guests quietly chattering amongst one another while the world seems to stand still for some time.

The simple orientation of the space brings focus to the details of the plants that are often overlooked when part of a broader park scene. The proportions of the space juxtapose strict architectural order and simplicity with the somewhat chaotic planting beds in the centre. The park itself is nestled within the order of the city of London, this building is nestled within the environmental chaos of the park, and this micropark is nestled within the order of the city reintroduced at a smaller single building scale. Compression and expansion nest the user in the space and provide a different framepoint for actually viewing the details of a park scene, so too forming more cohesive sensory experiences around them.



Figure 27



Figure 28

05 Precedents

Otaniemi Chapel

Architect: Heikki And Kaija Siren
 Location: Espoo, Finland
 Year: 1957

The Otaniemi Chapel is a Lutheran chapel located in the Student Village of Otaniemi campus of Aalto University in Espoo, Finland. Juxtaposing the mass of a masonry plinth with a dense upper wooden structure, the interior of the space draws in ample amounts of sunlight while maintaining a clear and focused ground plane for focus towards the pulpit. The atmosphere of the space continually changes as the climates and seasons change. Large windows at the lower end of the pitch provide a backdrop of a forest scene, highlighting the changes in the local environment and allowing each service to remain unique in its atmosphere if not its message.

The simplicity of the space is highlighted through the materials and their edge conditions. The wooden structure stays with the wood paneling, the brick masonry melts into the floor material and forms the plinth of the pulpit. Simple black metal seats with padding and railings simplify the furnishings to ensure a cohesive focus can be maintained in the space.

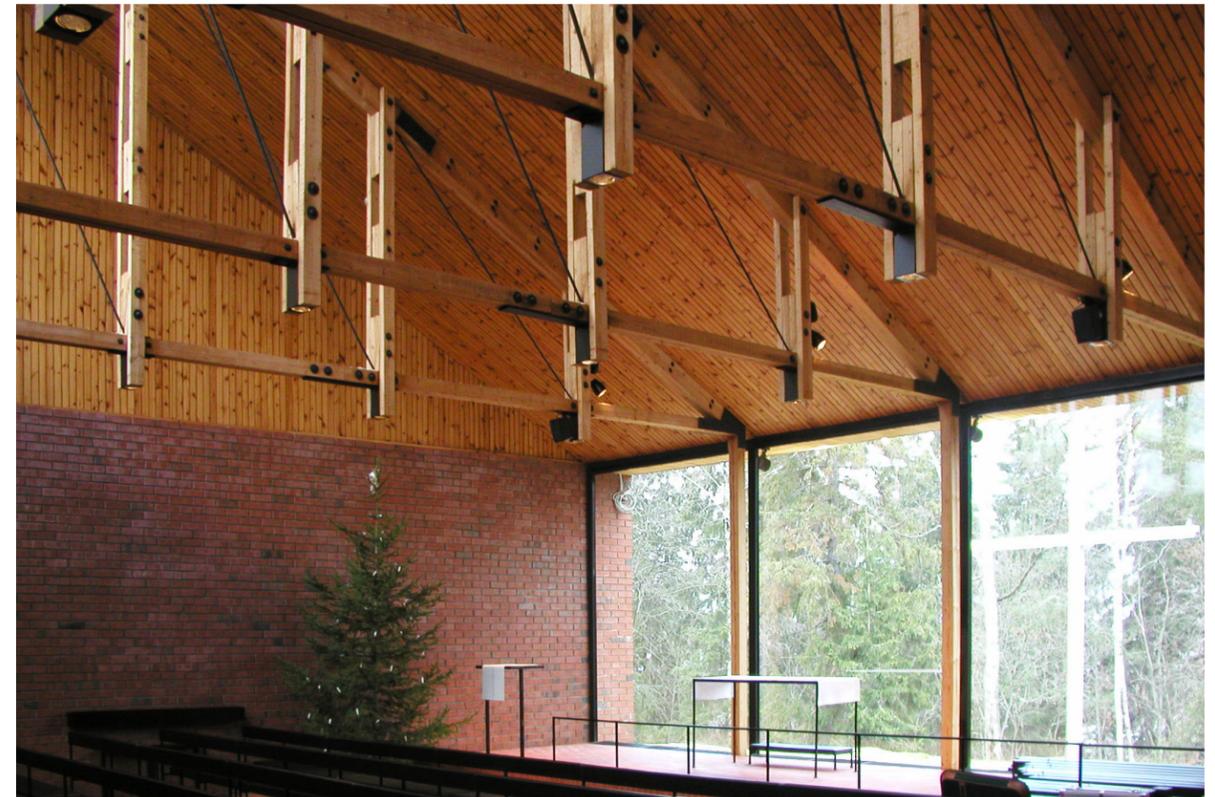


Figure 29



Figure 30

Precedents

Horai Onsen

Architect: Kengo Kuma Architects
 Location: Atami-shi, Japan
 Year: 2003

“The Japanese onsen is an ancient import arriving, it is theorised, with Buddhism, for which it served as a ritual bath. In Japan, these foreign ideas fell on fertile, volcanic ground. The preponderance of natural hot springs created a nation of bath addicts, and the onsen continues to be enormously popular today. Many are attached to traditional ryokan or inns in rural areas, where the bath is usually an outdoor pool fed by a hot spring. Architecture is often absent from such sites, or kept to the rustic minimum – a couple of wonky posts holding up a simple wooden roof, perhaps. Any barrier between naked human skin and nature is to be avoided as much as possible; however, there are also municipal versions, and a few examples by established architects. Eccentric historian and architect Terunobu Fujimori constructed a bizarre, stripy onsen at Lamune, with trees planted in each of its several pinnacles. More conventional are Kengo Kuma’s onsen. His Ginzan Onsen at Fujiya is a large and luxurious ryokan, but here the pools are private and attached to individual rooms – a significant break from the communal bathing-in-nature tradition. Kuma’s Horai Onsen, on the other hand, is a very simple monopitch corrugated plastic canopy over a communal wooden pool. Here, the view over the ocean is the star.”

Excerpt taken from:

Tom Wilkinson, “Horai Onsen by Kengo Kuma, Atami-Shi, Japan, 2003,” *Architectural Review*, May 14, 2021, <https://www.architectural-review.com/buildings/horai-onsen-by-kengo-kuma-atami-shi-japan-2003>.

No photos available under creative commons. Access photos of project by following this link or searching “Horai Onsen – Kengo Kuma”

<https://kkaa.co.jp/works/architecture/horai-onsen-bath-house/>

Site Location

Kelowna and Lake Okanagan

Nestled in the centre of Lake Okanagan, Kelowna is a city of diverse landscapes, microbiomes, climates – and all around environmental stimulus. Kelowna is a city with ample water, carved from glacial recession that provides a juxtaposition between mountainous and flat areas through lacustrine terracing^[1], the process by which glacial recession followed by a slow melt and movement carves relatively flat areas under to the coastline of the glacier^[2]. This terracing provides alcoves of flat and fertile land that are great for farming and development, and so we see the development of communities along this lake front occurring primarily in these flatter areas (shown in yellow in Figure opposite).

Major inflows to the Lake include Mission, Vernon, Trout, Penticton, Equesis, Peachland and Powers Creek – where each inflow to the basin is supplied by rain, melting snow or groundwater from porous deposits at higher elevations. The Lake is drained by the Okanagan River, but given the outlet of the Lake is small, only the top metre or so of water is circulated year over year – providing fresh water for use at the surface level that raises and recedes depending on the season (where snowmelt acts as a major contributor to water level).

The Lakes maximum depth is 232 metres (761 ft.) although given the glacial nature of the Lake's formation – It is not uncommon for the lake to be 100m deep only 10m offshore. However, much of the shoreline around the inhabited parts of the Lake remain quite shallow and so too provide good opportunities for swimming, and good temperature fluctuations as the temperature and sunlight react with the shallow shoreline waters.

The fertile soil and the mild climate provides a perfect space for vineyard agriculture, and so Kelowna and the whole of the Okanagan is heavily populated by vineyards. This and the stunning mountainous landscapes that surround this basin of water draw in ample tourists during the year, – especially so during the late Summer and early Fall months when the vineyards are harvested. The city of Kelowna acts as something of a nexus point in the Okanagan. Its central location, and the sole bridge across the lake is located in this city – where the BC 97C Highway acts as a major thoroughfare for travel between Vancouver and the Interior of the province towards Alberta. This location provides people, activities, diverse climates and environments and a massive body of water that can be used in the bathing process. Without a pre-existing communal bathing infrastructure present (other than simple bathrooms along the beachfront) – this provides a wonderful opportunity to present a new infrastructure into the space.

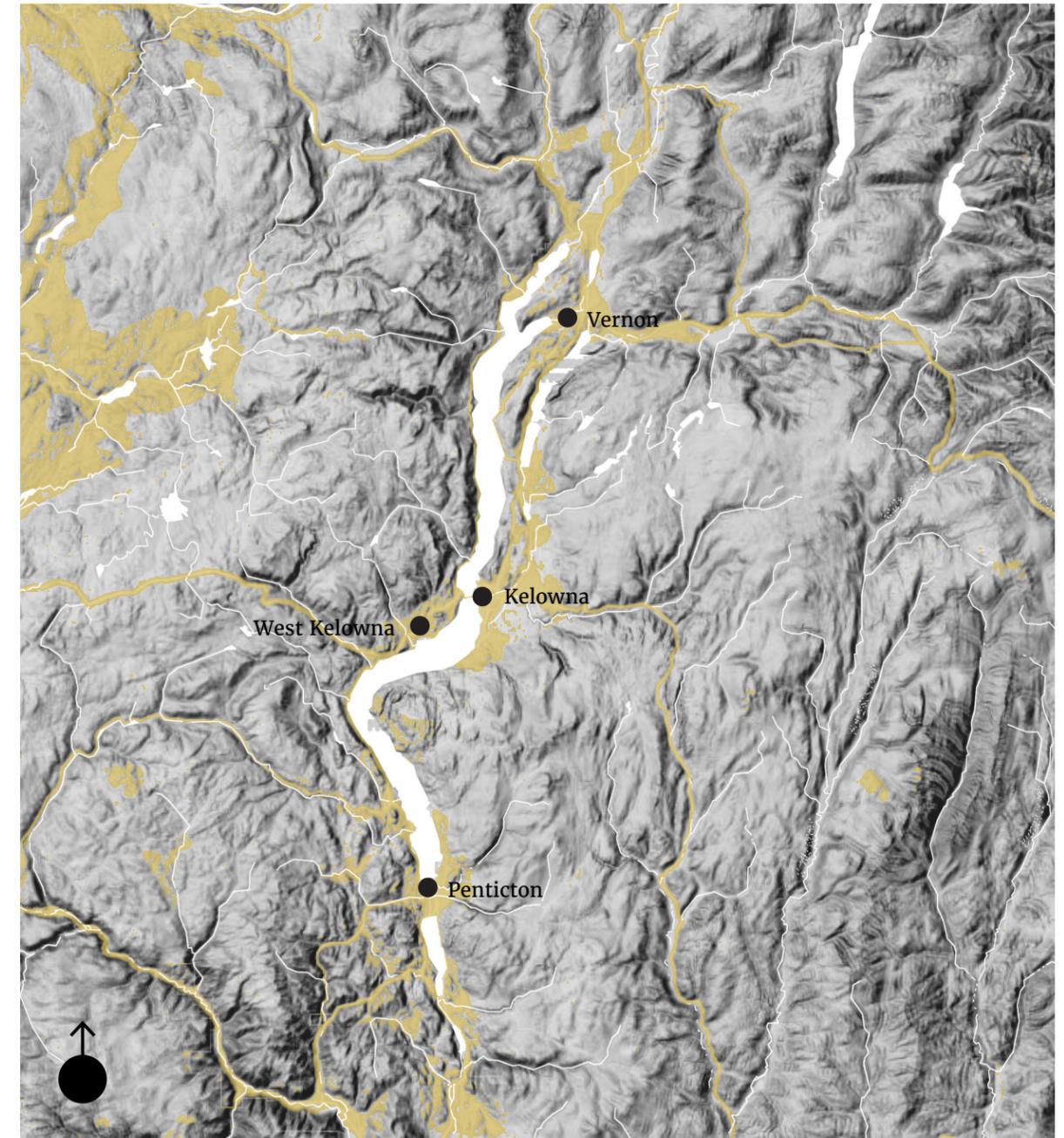


Figure 31: Greater Okanagan Region and Location of Kelowna – major city development held within flatter yellow areas

It is important to consider that much of the Okanagan shoreline that can be developed has been developed. We use valley bottoms in the Okanagan Basin for agriculture, recreation, towns, and roads. Nature has been squeezed out of many areas. Wetlands have been drained and filled, and many streams and rivers channeled and dyked, to create land for our agriculture and towns. Remaining wild spaces in the flat terrace areas are precious.

The Kelowna Downtown City Park, located along the waterfront at the core of the downtown area, acts as a small slice of natural space in what otherwise is a fairly developed area. What is interesting about this site is that it is much like Zumthor’s pavilion in Kensington Park, different conditions nest into one another to constantly reorient our perception and focus. The mountains make up a ring around the basin, and in every direction you turn you are generally aware of their presence. Within this is the heavy human development within the flatter terraces. This development juxtaposes the conditions of geography, where nearly every easily developable area in the city has been developed with some sort of infrastructure – clashing with the elements of geography that are not easily developable. The City Park straddles the lakefront within the densely populated development of the downtown core, providing natural space within this development. This space is heavily catered towards recreational purposes, with much of the existing park infrastructure servicing various sports, walking paths or gathering spaces for people or their vehicles. The proposed site sits along the generally quiet upper corner of the site, providing an immediate intersection between the downtown, park, lake and the mountain views that extend out over this. Within this setting a building is to be proposed that nestles into its natural setting – while also providing an ease of access for the community.

Endnotes:

- (1) – Martin Stewart and Remi Allard, A Revised Geological Model and Hydrostratigraphic Framework for the Kelowna-Mission Aquifers, 2018, https://a100.gov.bc.ca/pub/acat/documents/r54469/WSS2018-03_Mission_Ck_1532284001708_2278704448.pdf.
- (2) – “Terrace (Geology),” Wikipedia (Wikimedia Foundation, November 28, 2021), [https://en.wikipedia.org/wiki/Terrace_\(geology\)](https://en.wikipedia.org/wiki/Terrace_(geology)).



Figure 32: Lacustrine Terracing

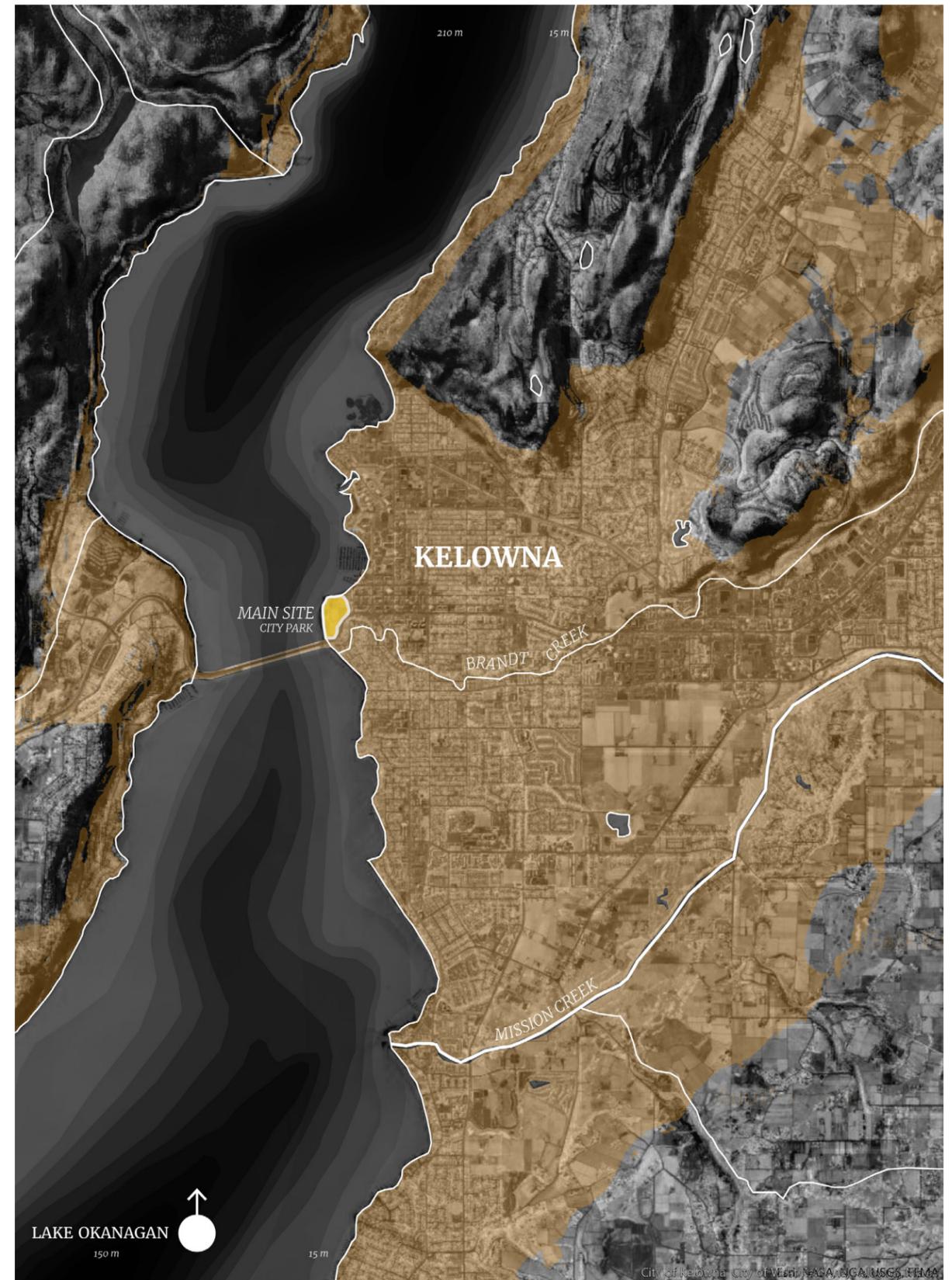


Figure 33: Kelowna Map and Site Location

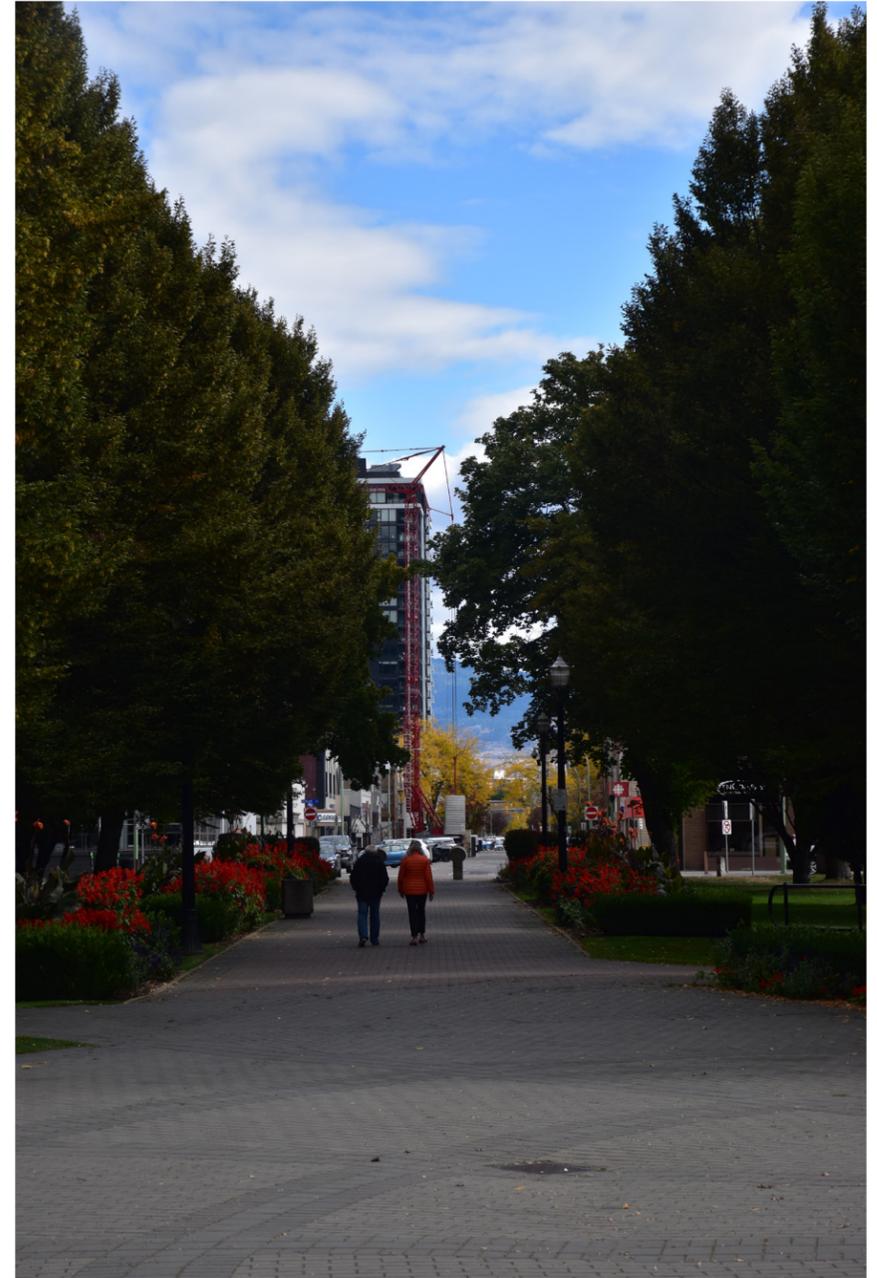
Figure 34



Figure 35



Figure 36



Mountains
City Edges

Terraces
Downtown

Figure 37: Location of main thoroughfare of city in BC 97C

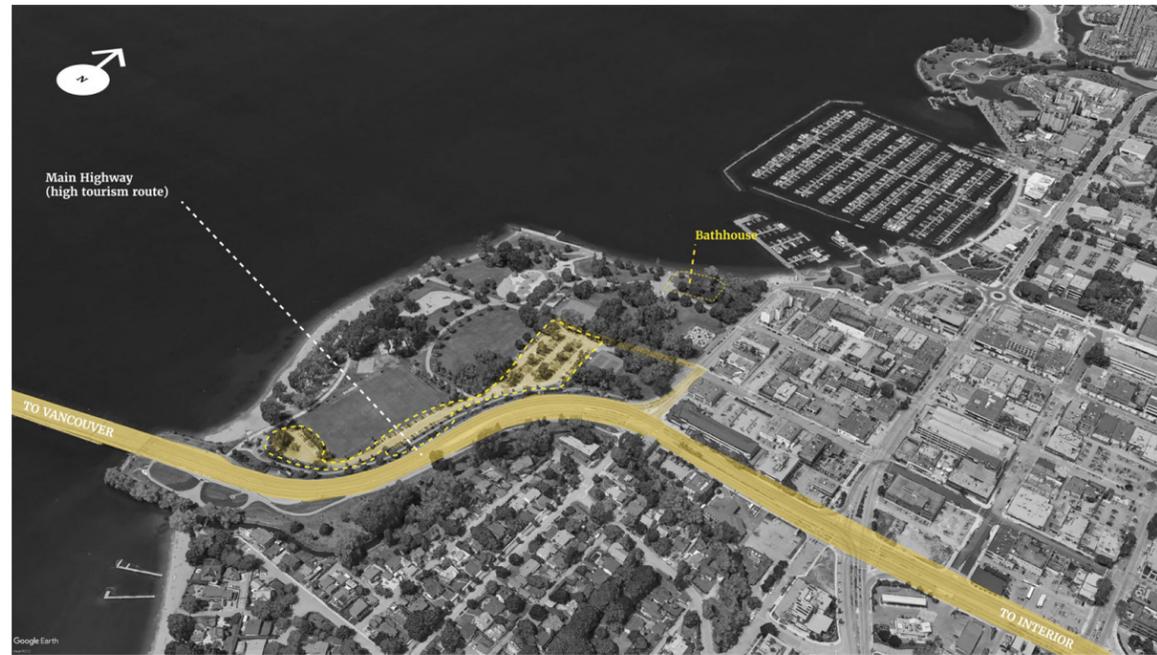


Figure 39: Downtown Core of the City supplying workers and recreational activity



Figure 38: Adjacent Neighbourhood to the South of the Site



Figure 40: Downtown City Park - Filled with ancillary recreational activity. Bathhouse location within Park

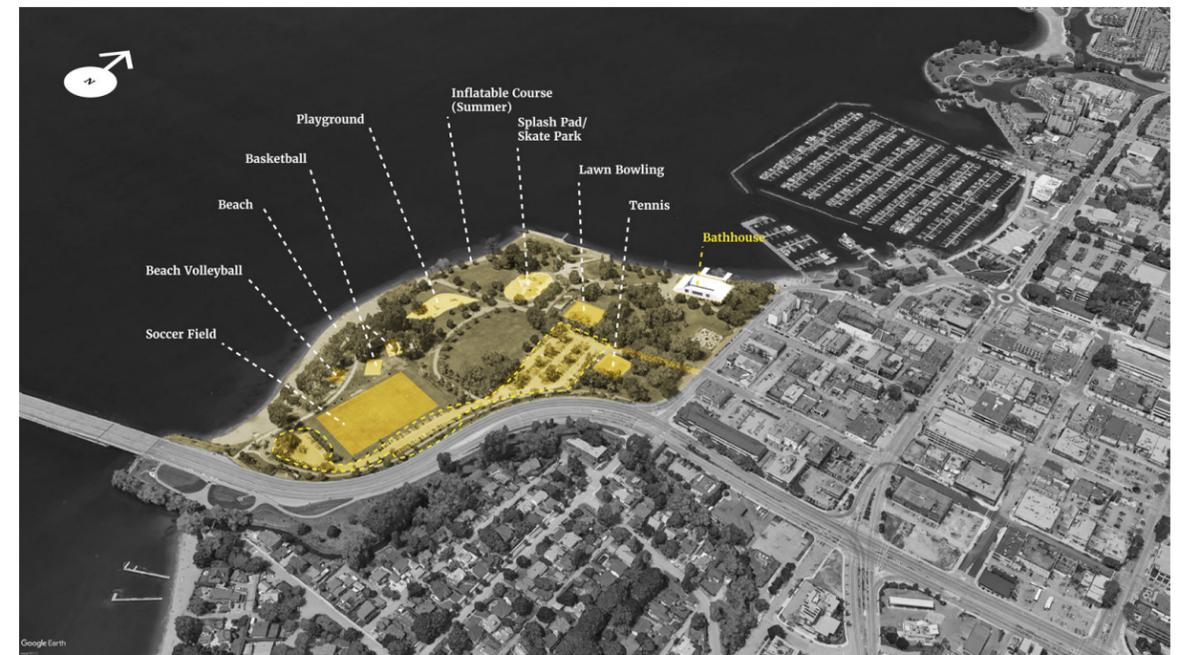


Figure 41: Adjacent Infrastructure on Opposite side of road



Figure 42: Fountain sculpture and entryway into park, continuation of path into park



Figure 43: Site edge condition – water levels change (generally +/- 1m) throughout year



Kelowna is very much a small-town city. The main highway is heavily catered towards cars and so the infrastructure and scale of design reflect this. Coming off this highway though, quieter streets, ample shops, a lakefront pathway, views out over the Lake, pedestrianized zones and market spaces during the warmer months and the park itself serve as means of catering to the scale of the body in this city.

The proposal is taking something akin to Gehl's stance mentioned earlier in the document (Cultural Values section, p.20), that strained attempts at making interesting architecture can be saved if the spaces in and around the buildings speak to the scale of events that might occur if you were a person using your senses on the street. As such, the building will look to take what exists and add to it through simple infrastructure that will allow all of the public to enjoy the building and add to its atmosphere.

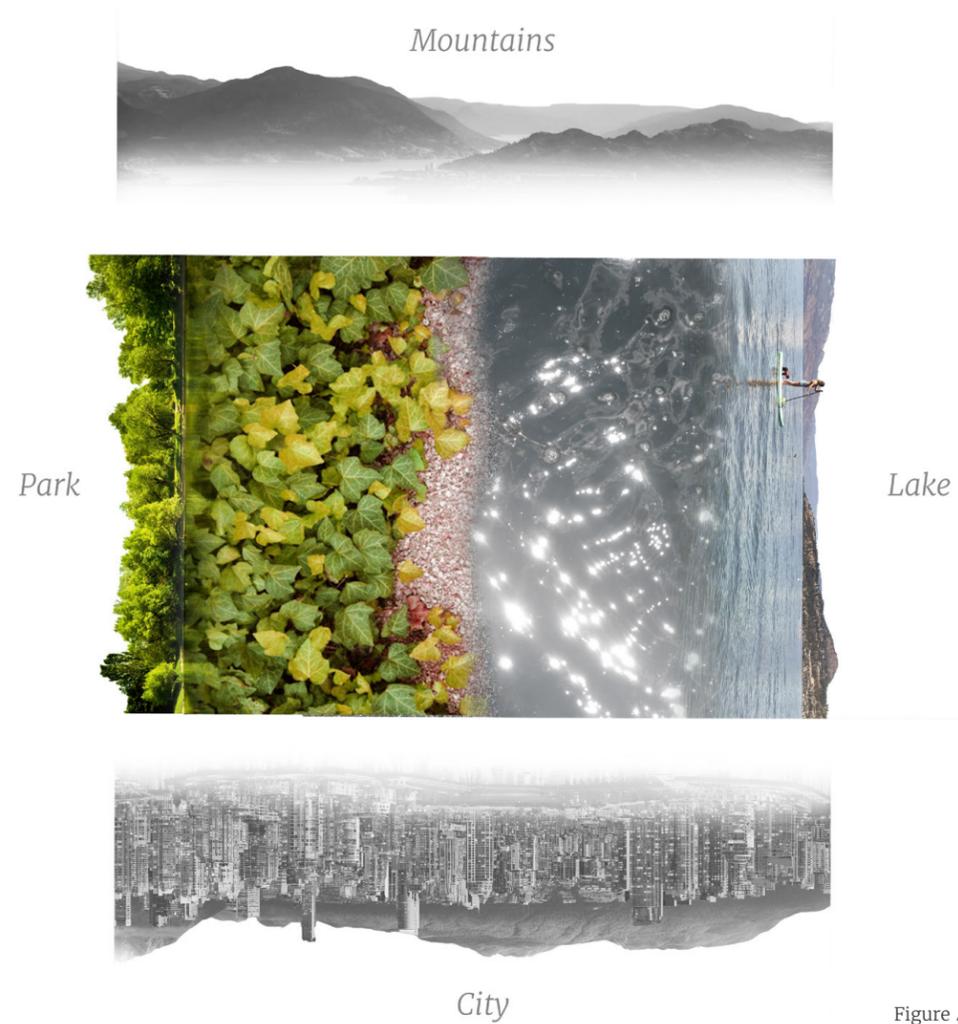


Figure 44 - Concept

The building bridges four major elements – it responds by breaking down each of these elements into smaller areas of direct focus. The scale of the city and mountains overlooking the Lake will be catered to broader outlooks – drawing the focus outside of the building. The creation of an interior courtyard will begin to bridge the elements of the Lake and Park through water, plants and weather – and this space will be catered to an inward focus on smaller and more intimate details.

This parks serves as a prime location for the “foundation” for future public bathing typologies to emerge in this region. Given the vast expanse of water and water movement in this region from the Lake and Mountains, one could imagine that smaller pavilions could begin to break off to meet these natural water sources at their naturally occurring paths – helping to bring more people out to explore their environments with even less human “intervention” and order. This instance focuses solely on the main artery of this – what will be the core branch to help dip the public’s foot in the water, so to speak.

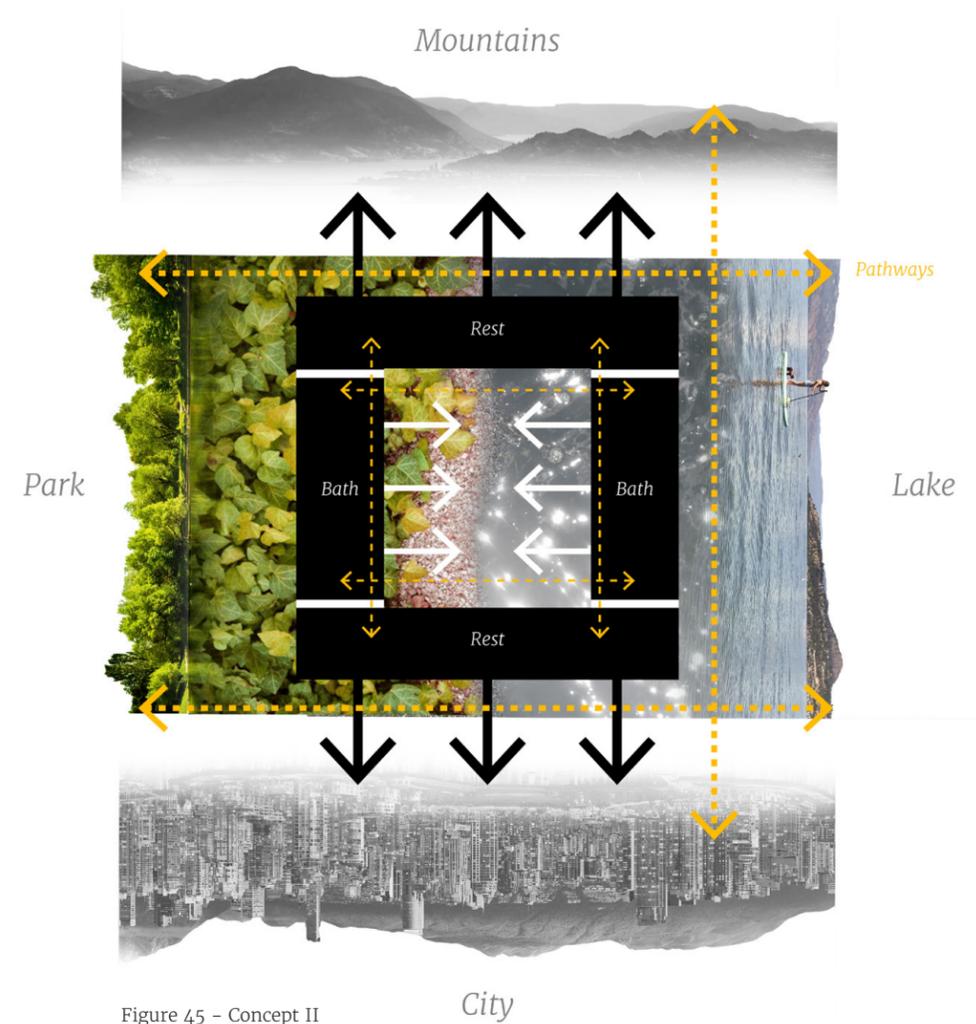


Figure 45 - Concept II

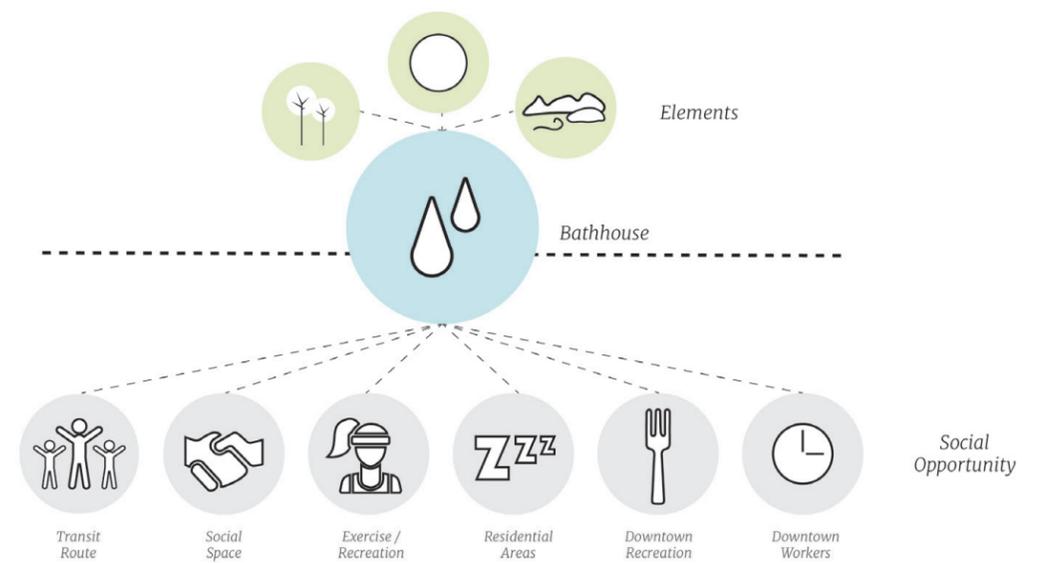


Figure 46 - Park Ancillary Amenities

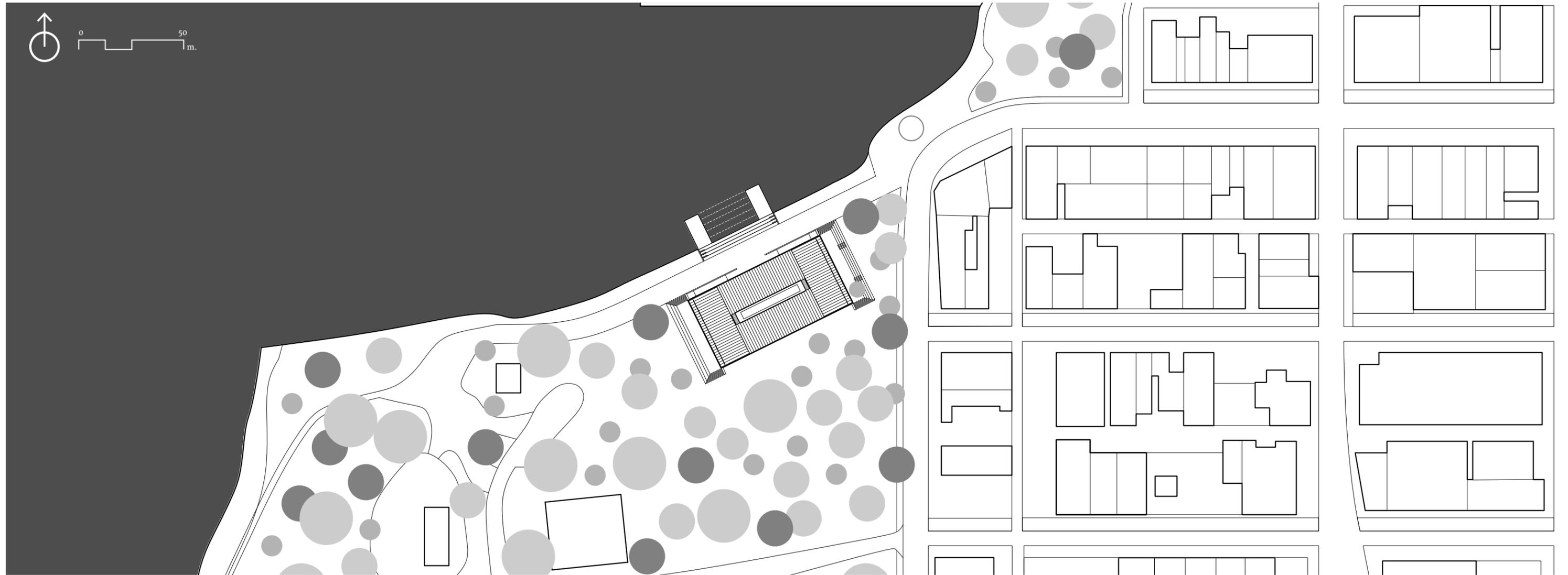


Figure 47 – Site Plan

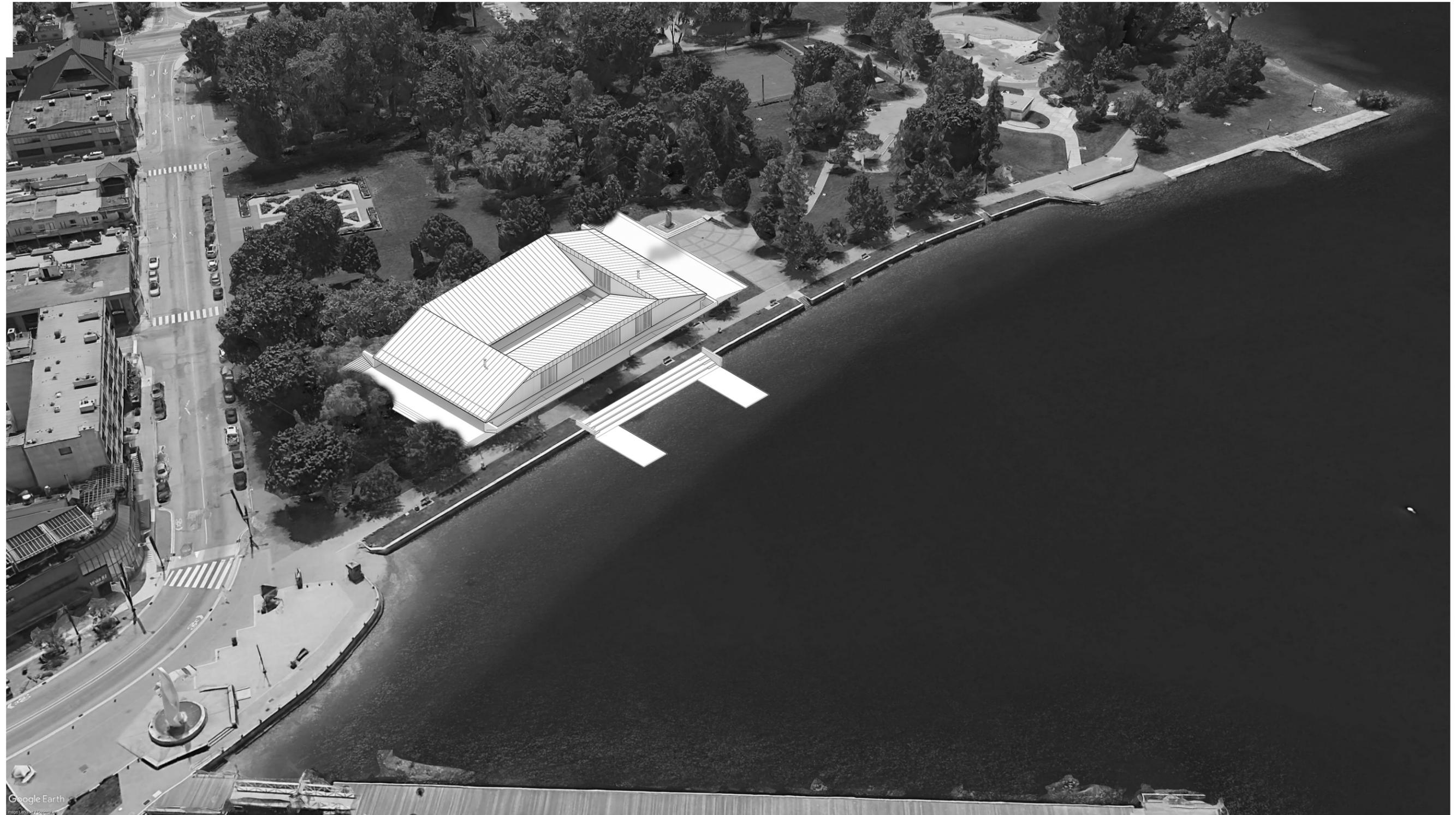


Figure 48 – Site Axonometric in Park

07 Bathhouse Proposal

Simplicity and Focus

The core motive of the proposal is to serve as a small getaway from the bustle of the downtown core to draw some legitimate focus back to the details held within our ecological and climatic surroundings using the body and its sensory system as the medium by which to relate to this. Given the core focus is on this ecology, water and the role of the body within these domains – the bathhouse proposal becomes quite a simplistic space – 4 ordered wings oriented around a core courtyard nestled along the lakeside. From this, the building nests into the park, and then the park back within the building, creating opportunities for some privacy within the bathing spaces, and opportunity to experience a greater detail of one's surroundings.

Taking inspiration from other bathing traditions, the bathhouse looks to create simple motor rituals surrounding bodily exposure to contrasting conditions through order and repetition. Two bathing wings are contrasted by two relaxation wings. Public space eases slowly into private. The park both surrounds the building and enters within it, and the bathing can take place within the building, courtyard or lake – allowing for an ample number of unique bathing conditions.

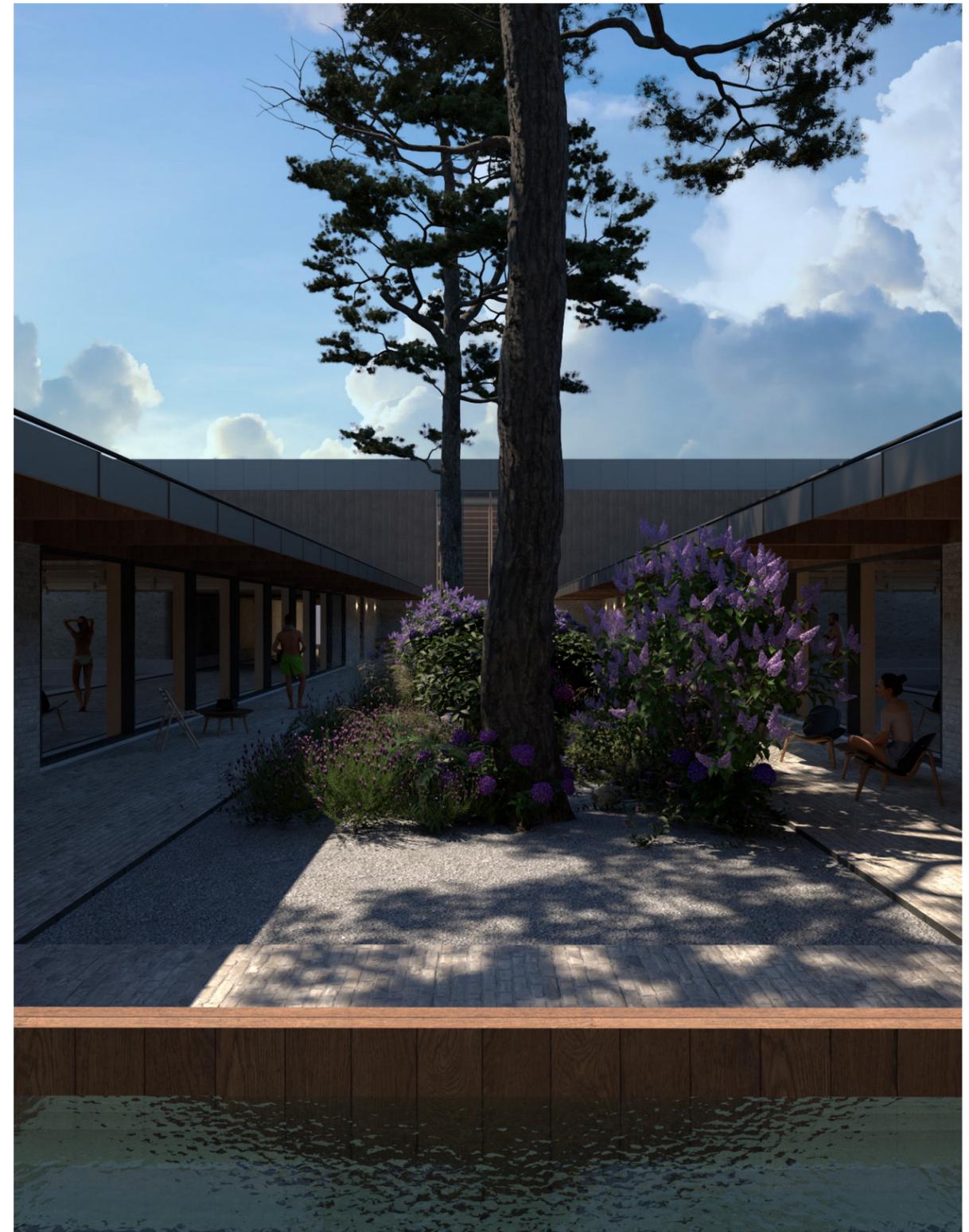


Figure 49 – Core Courtyard

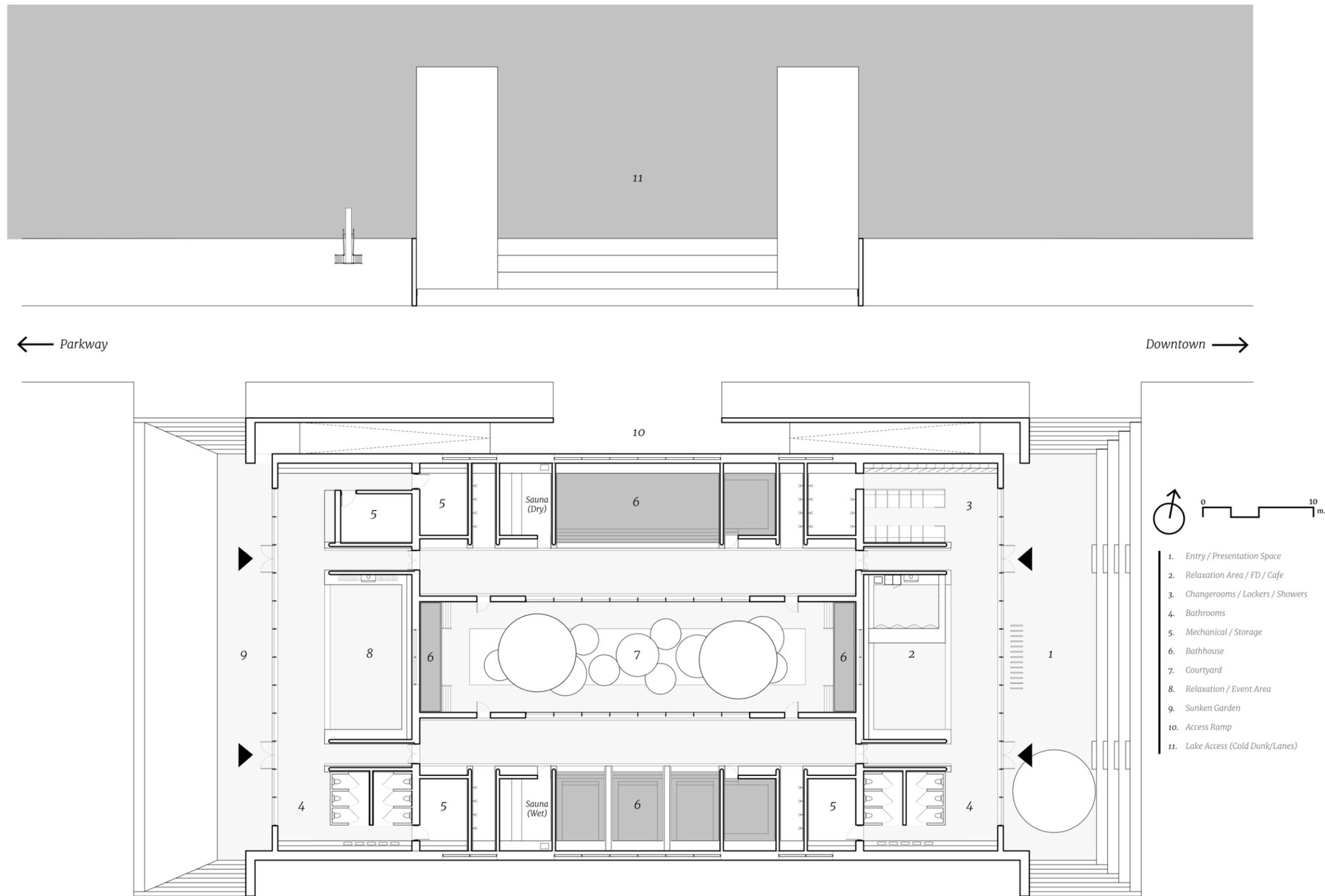


Figure 50 - Floor Plan

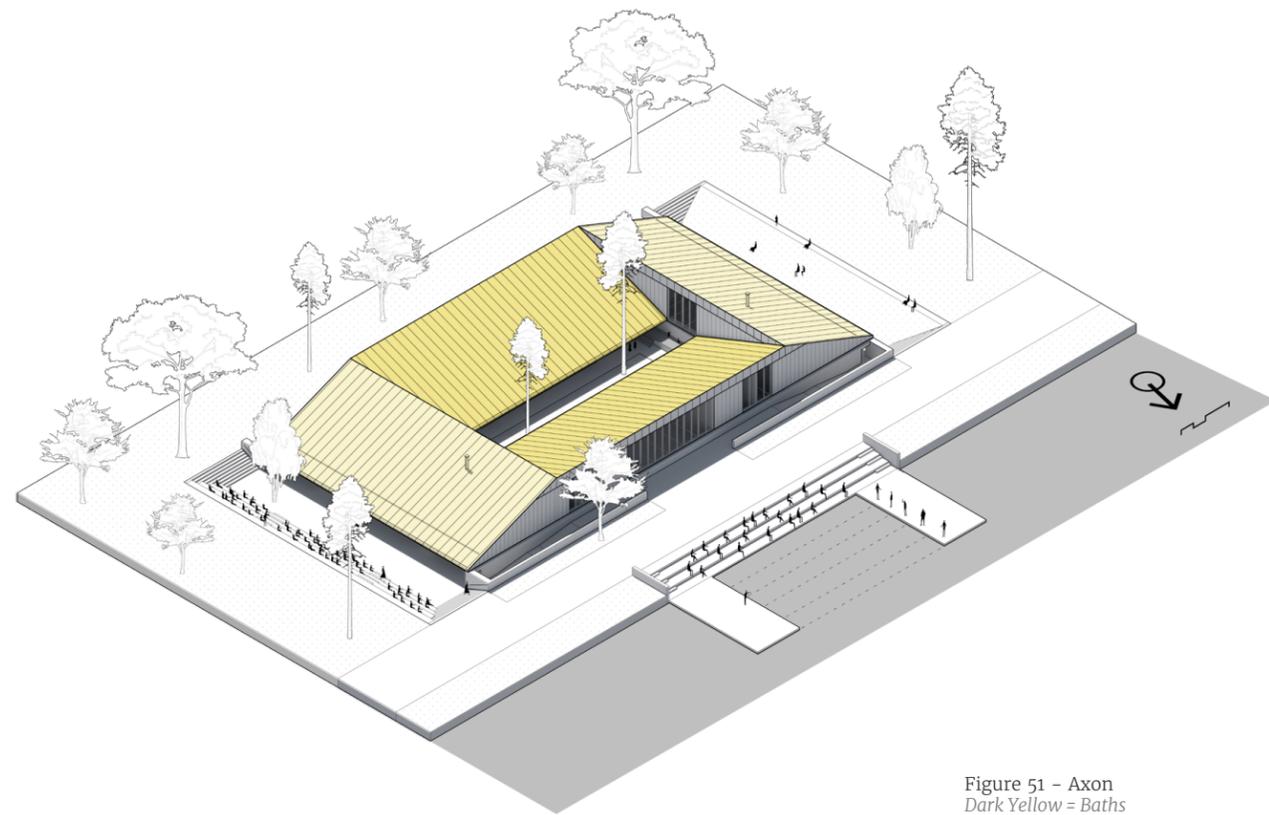


Figure 51 – Axon
Dark Yellow = Baths
Light Yellow = Relaxation

Entry

The path along the waterfront leads me in front of a mass sunk into the ground and facing the Lakefront. Here, the noise of the city dies down somewhat as the sounds of whirring leaves and singing birds muffle with the splashing water of swimmers at the dock or the casual chatter of friends sitting for a conversation in the sun. The sinking building creates two courtyards that face opposite directions – one engages the direction of the city, while the other faces the interior of the park. I can see trees jutting out of the buildings centre, their canopies the suggestion of another space nestled within a courtyard.

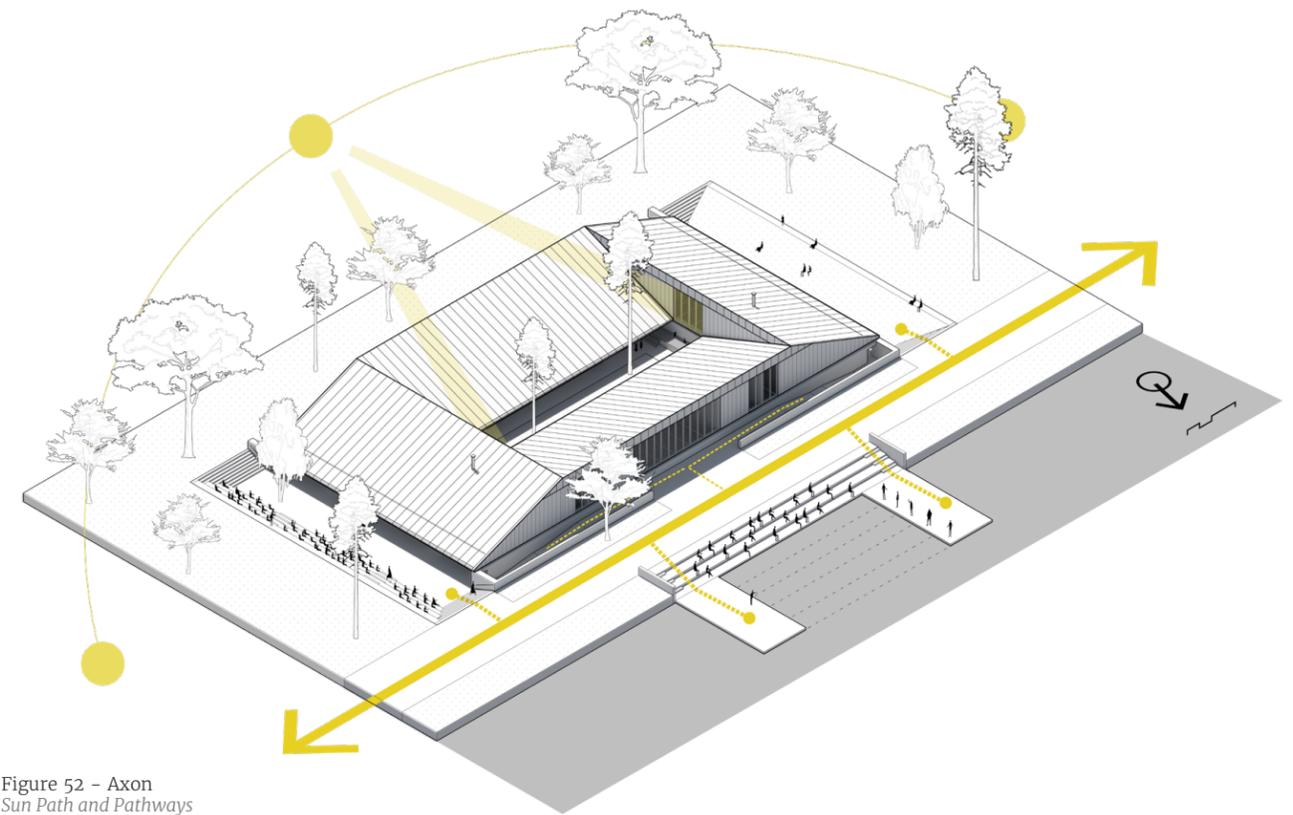


Figure 52 – Axon
Sun Path and Pathways

Activities along Waterfront

These two courtyards present opportunities for different programs to come and infill the space as they need. The sunken courtyard facing the city provides seating oriented around a large flat stage space. A violinist plays soft melodies at this spaces centre as people attentively watch on from the perimeter. On good days, tables spill out from the interior spaces and bring the interior Cafe out into the park. People lie on the steps to sunbathe – surrounded by the aroma of surrounding foliage and flowering plants, while the cool wind is drawn over us off the Lake. On the cool white Winter days, this space gathers snow, and I can see those in the bathhouse come out to roll in it before quickly returning inside to reclimate.

The opposite courtyard draws the park into the sunken space – providing an easing transition between the foliage and the architecture. People sit along the hillside and relax amongst the plants. Several people in bathing suits leave this space and head up towards the docks, here they ease themselves into the Lake for a casual swim to cool off or for a quick plunge during the cool Winter. This alcove provides a sense of structure in the Lake, and throughout the year you can begin to see the changes in the Lake itself as its water level rises and falls – and so too its docks.

Figure 53



Figure 54



Figure 55



Building Entryway

The lavender infuses the air during the Summer and people watching provides an activity for us all to engage in together. The entryway provides basic amenities for the public. A bike rack steps off the face of the building, while the large flat space provides a meeting space for events, socializing or relaxing. Two entry doorways ensure that there is little interruption in the programmatic flow of this space, where those entering the building to get changed, use the lockers, bathrooms, Cafe or the bathhouse itself – and those leaving the bathhouse to use the park or Lake do not intrude on the events or people acting in the centre of the space. Here a good mix of people come in to the space, I can see businessman come in for a quick soak at lunch, families letting their children play in the water, couples taking a break from walking the Downtown and soaking in the atmosphere. This space constantly changes.

Lakefront

The soft chime of trees swaying in the wind fills my periphery as the pathway straddles the Lake edge and the park foliage. Off in the distance, the Mountainous hills of West Kelowna provide a beautiful backdrop to those sitting on or around the docks, diving into the water off the diving boards, or just walking along the waterfront pathway. I can see many people walking this path – some here casually, some finishing up their sports in the park and coming to the Bathhouse to rinse off and get changed, while other bathers from the Lake or the bathhouse intermingle.

Dock

I take a seat and watch swimmers move back and forth in a 25m framed section of the Lake. I hear outdoor swimming competitions now take place here, something that hasn't been present in the Downtown Park for decades. Some choose not to swim but instead sit and soak in the expansive views out over the Lake. Others populate the decks, laying their towels out onto the wide space to sunbathe – only to hop into the water next to them to cool off when needed. During the Winter, this framed section of Lake freezes over slightly, and holes poked into the ice provide a quick contrast for the steaming bathers walking with pace out to the Lake. I see them hop in, take in the shock with a deep breath, and then stay for a short while before scurrying back into the relative warmth of the bathhouse. These bathers populate what is otherwise a very quiet park during the Winter.

Figure 56



Figure 57



Figure 58



Entry Wing

Soft music plays over the piano as light dapples in from the upper windows. Here people are moving in and out of the space – stopping, staying, eating, talking or moving between the confines of the bathhouse and the expansive outside realm. The front desk nestles into the corner of the room. Behind it lies the equipment needed for those bathing – towels, soaps and tools to scrub oneself with in the shower. A fireplace nestles in behind this space – being lit on the cool mornings or white winter days, but also being used to cook and heat food for the small Cafe serviced by the desk staff. Shelves of books, magazines and art form a backdrop to the seating spaces. Here people read quietly, talk to those around them or await their return to the baths after this stint of relaxation has ended. The changerooms, lockers and showers at the end of this wing and the bathrooms on the opposite bring in people who come and go, slipping quietly down the long corridors to the baths or outside into the wider city.

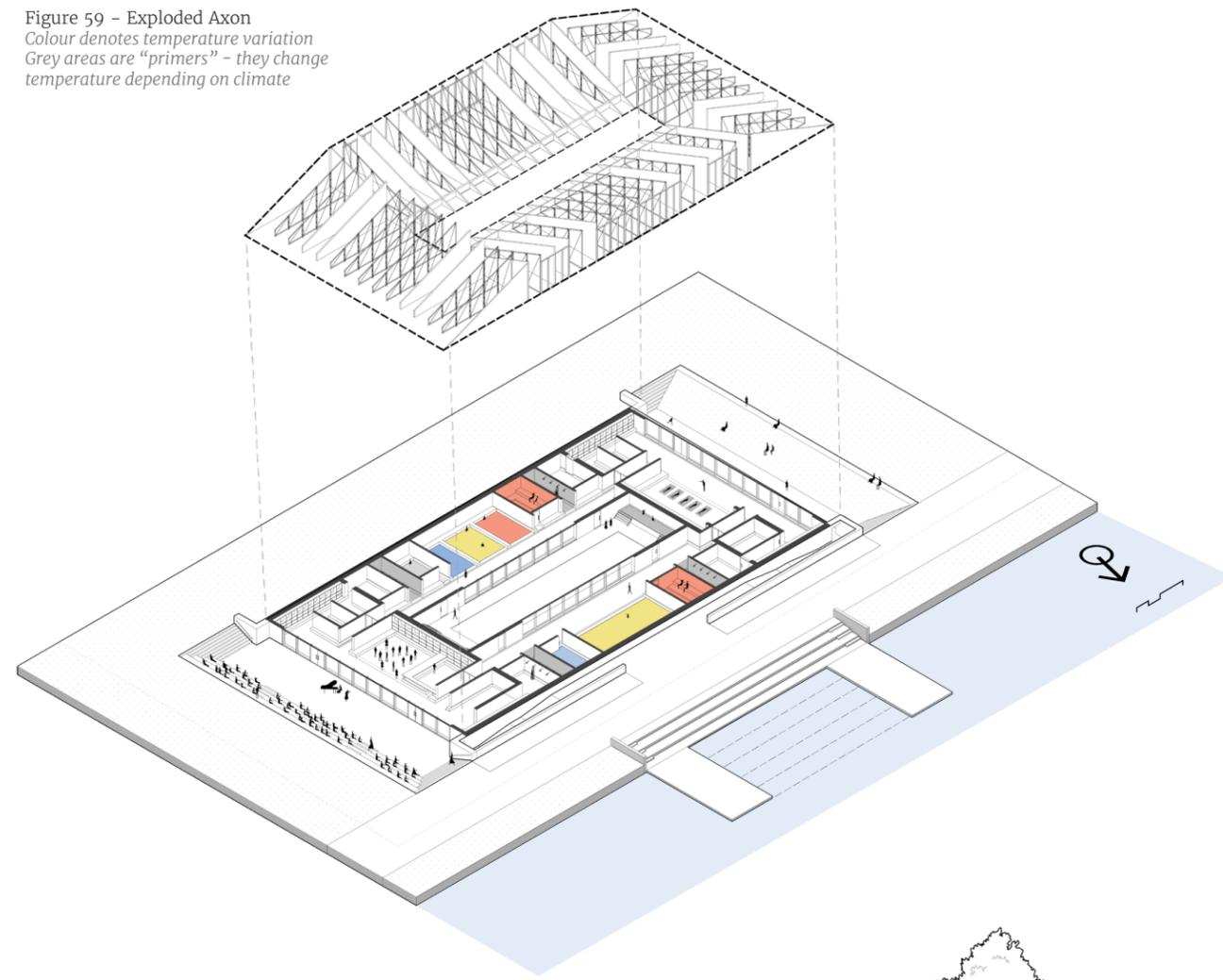
Structure

A dense wooden canopy sits above us and dapples the beams of sunlight penetrating the lower spaces. This space is messy but clear. The structure sits above us – the spaces of use inhabit the domain below. A masonry plinth rises to meet this structure, with neither passing the boundary created between them. Concrete inhabits the ground, providing a base for the masonry to sit upon, but also ensuring that any pooling water doesn't affect the structural walls of the space.

Activity Wing

A yoga class sits in the large space during the cool morning – depending on how cool it is we can light a small fire to keep the space warm while we stretch. The setting sun pours into the space and makes our shadows long like the trees we can see outside. During event times, this wing is closed to allow for the events to remain focused, the bathers instead remaining in the three other wings. Tables, chairs and whatever other equipment we might need are held in the storage room on the end of the wing, while a bathroom inhabits the opposite. We look out onto the park and get glimpses of the scenic West Kelowna mountain ranges that extend out in front of us. Here we come together as a community.

Figure 59 – Exploded Axon
 Colour denotes temperature variation
 Grey areas are “primers” – they change temperature depending on climate



Bathing Rituals

The baths can be entered down long corridors that match the path of the entry doors to the two relaxation wings. In these spaces, showers, baths and then saunas are all held in a set ritual order, moving from colder conditions to hotter ones, punctuated by showers that act as temperature primers for those entering the courtyard, baths, lake or relaxation spaces. The courtyard in the centre serves as a bridge between the two wings, acting as a much quicker way of scurrying to the other bathing wing without having to walk around the relaxation wings. In this courtyard, two long and deep baths on opposite ends of the space. This courtyard is filled with both light and foliage, and provides an immediate contrast and a privatized focus for the bodies making use of the baths.

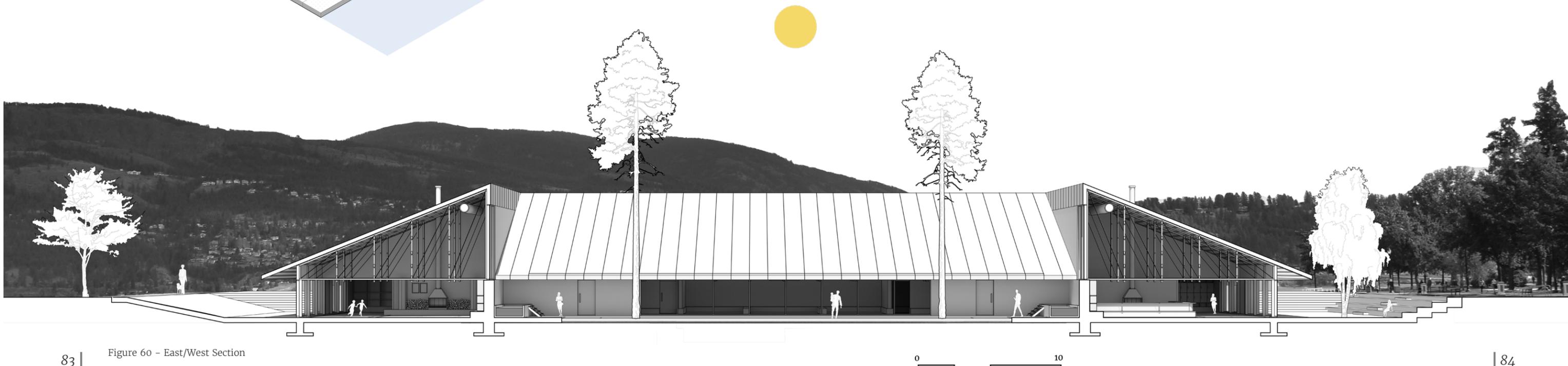


Figure 60 – East/West Section

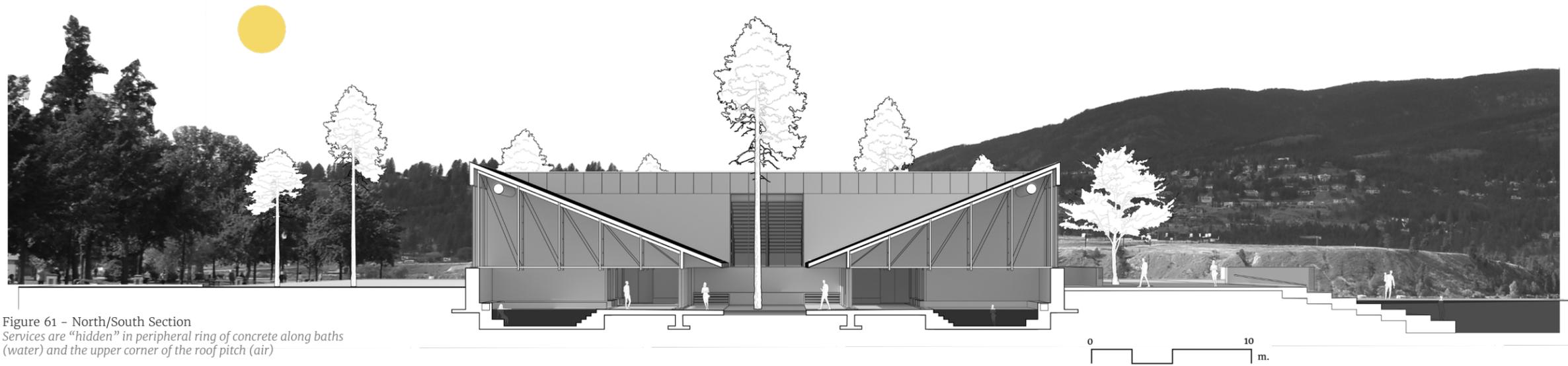
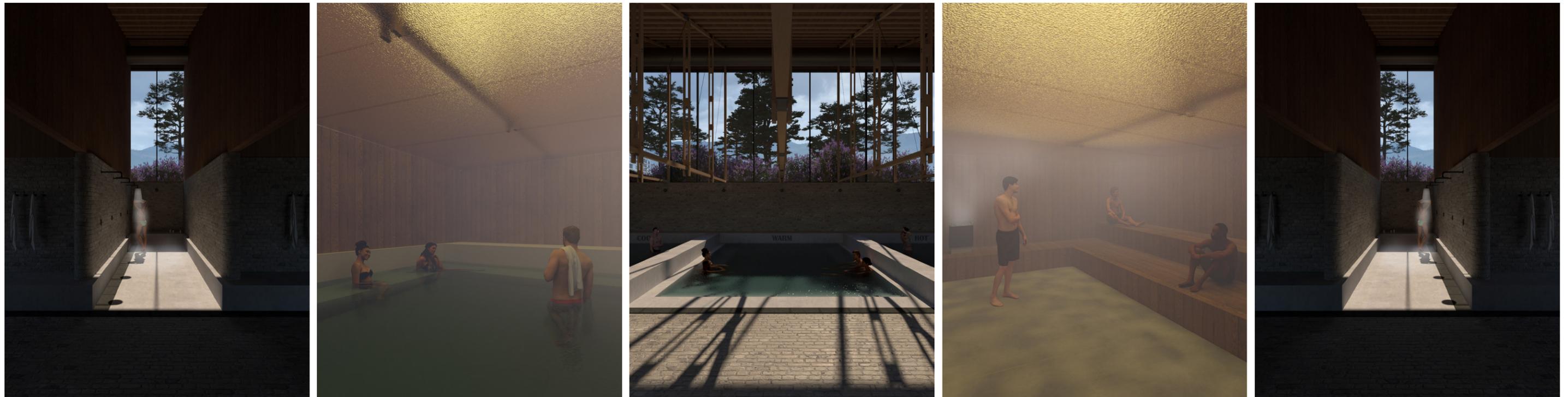


Figure 61 – North/South Section
 Services are “hidden” in peripheral ring of concrete along baths (water) and the upper corner of the roof pitch (air)

Figure 62 – Ritual Series



Shower

Small Pool

Pools

Sauna

Shower

Outdoor Contrast
 (Courtyard or Lake)
 Relaxation Spaces



Showers

I start with a shower in a large, airy space. Here I can prime my body with water temperature of my own choice. The showers serve as the entryway and the exit in a way, all the bathing either inside, outside or in the lake pass by these showering spaces, allowing people to clean themselves off and prime their body for whatever they'd like to do next.

Small Pools and Saunas

Next to the shower is an enclosed bath of a temperature varying depending on the time of year. A drop ceiling of polycarbonate encloses the space and diffuses the artificial light coming from above. The light changes in intensity and colour depending on the time of day and the conditions outside.

A dry sauna provides a dry heat without moisture, meaning the body produces much more sweat in order to try and cool itself. The wet sauna in the opposite wing fills the room with a blanket of steam that helps keep you cooler for longer periods of time. These spaces contrast with the openness of the rest of the bathhouse and the exterior courtyard. They are quiet, artificially lit and simple. Here I can sit in my thoughts.



Figure 64 - Enclosed "primer" Bath



Figure 65 - Sauna

Figure 66 – Day Pools

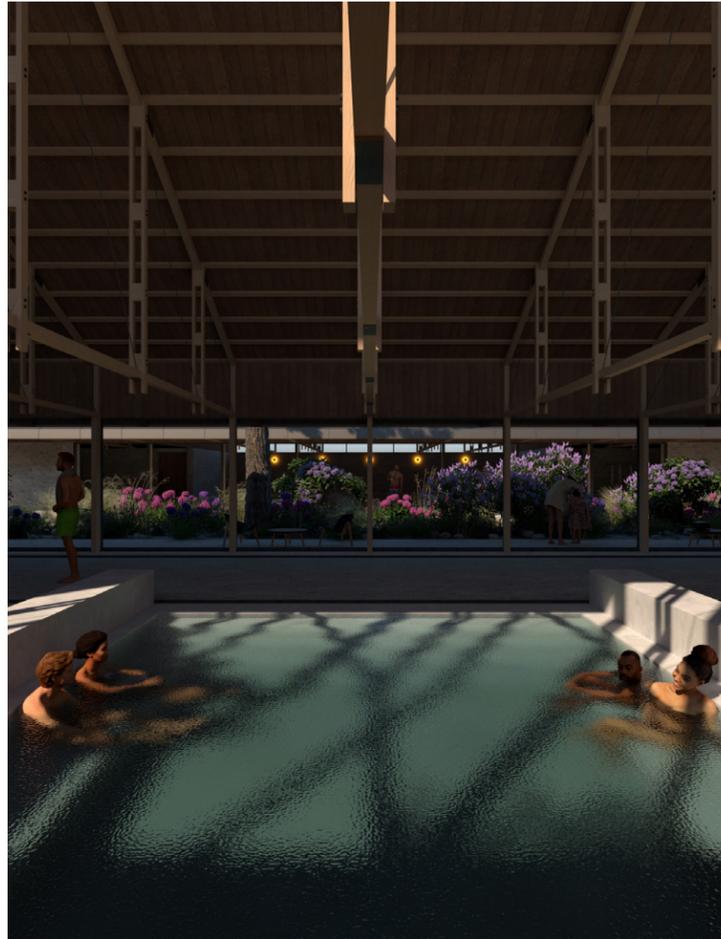


Figure 67 – Night Pools

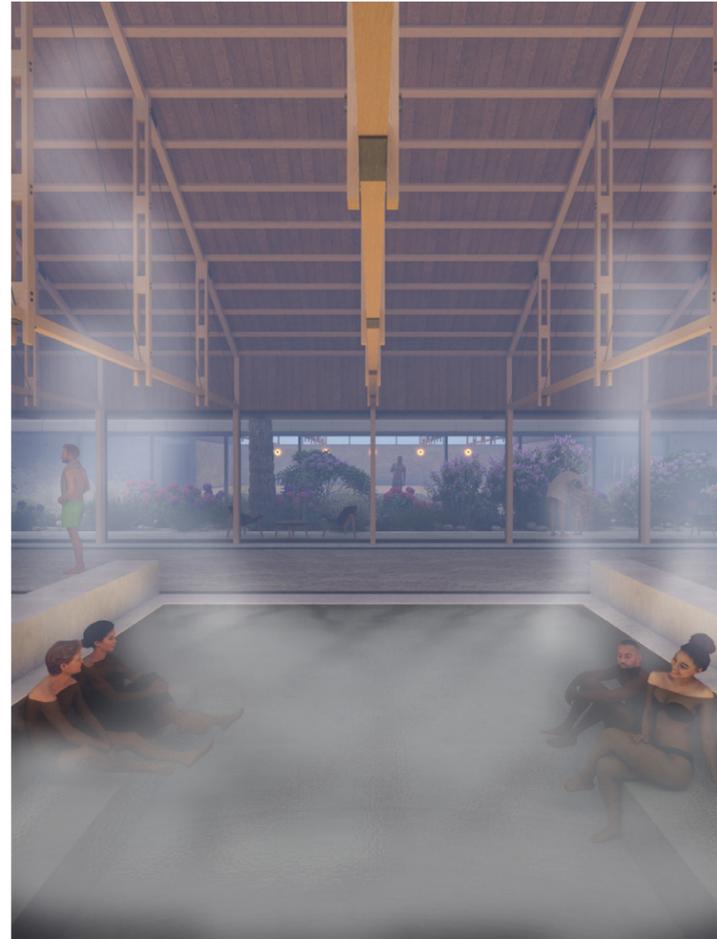
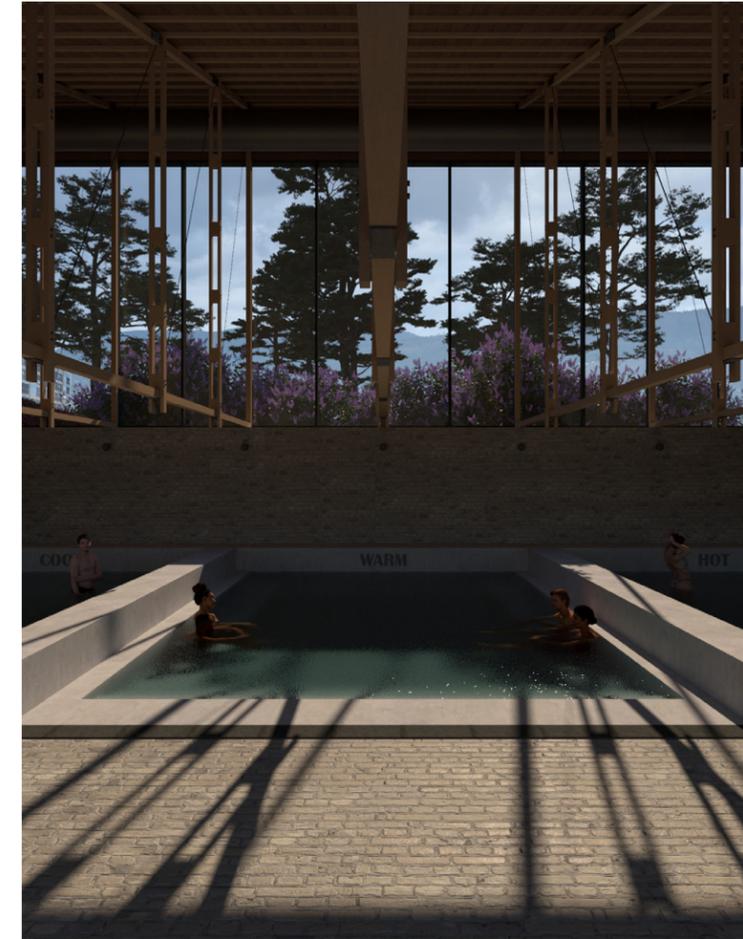


Figure 68 – Pathway view to Park



Pools

On the Southern side, 3 smaller pools of differing temperatures provide an easy flow of movement and a quick bodily contrast. A cold pool ranging from 10–15 degrees, a temperate pool of 25–30 and a hot pool 35–40 degrees all sit in succession to one another, and I can choose to stay in each as long as I like. Each provides simple seating facing the centre of the pool so I can socialize and relax with others as they move between the three. The large windows provide a scenic outlook out into the park while I move around the bathhouse's interior pathways. While I sit in the baths though – my focus is oriented towards the lush vegetation and calming atmosphere of the interior courtyard. Here I can see how the weather changes: the wind howling, raindrops sneaking from the roofs, plants gently flowing and aromas drifting inside.

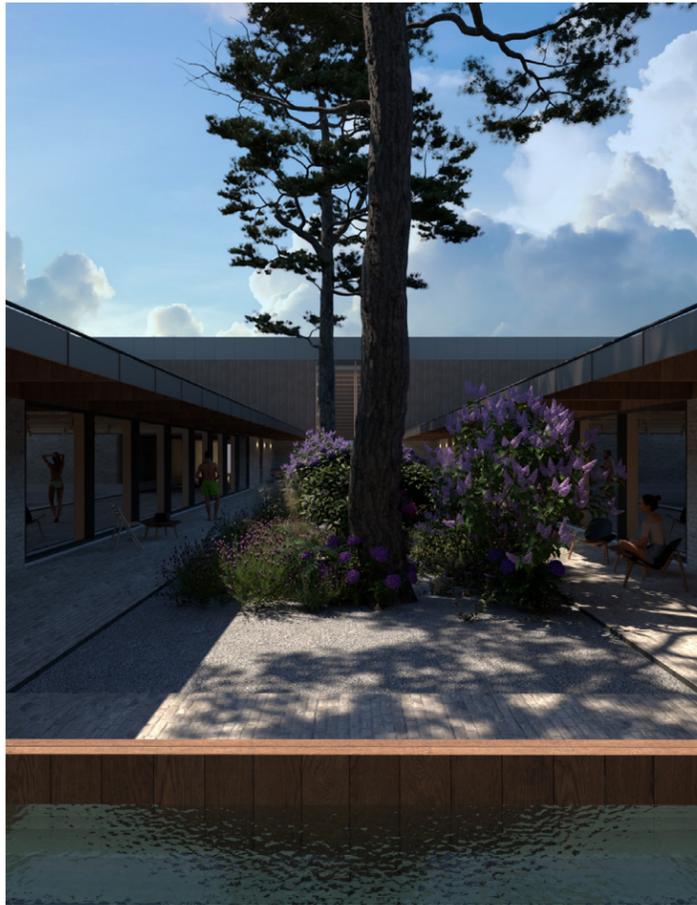


Figure 69 – Courtyard Day

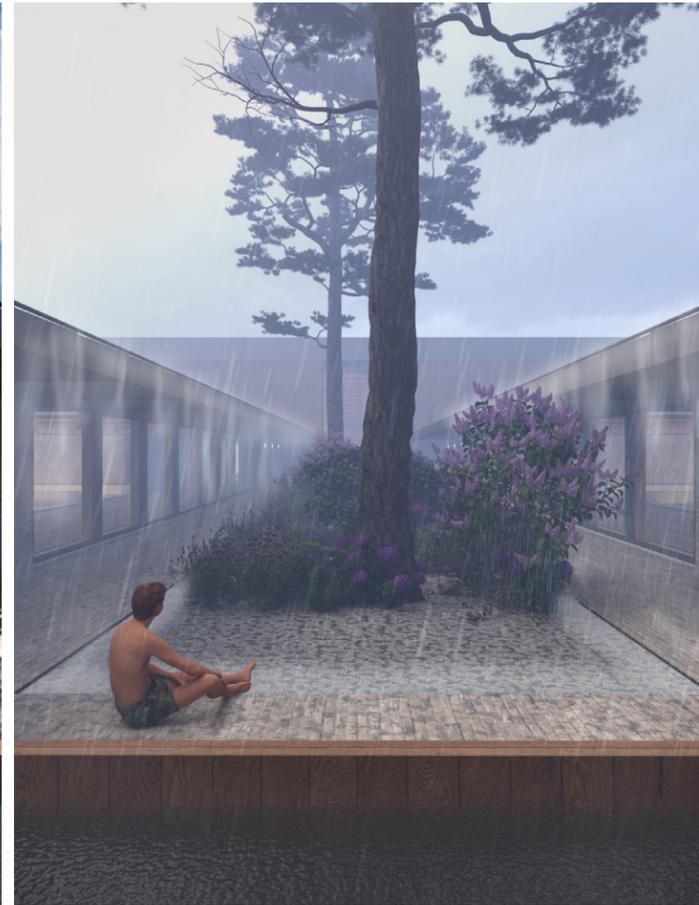


Figure 70 – Courtyard Rain



Figure 71 – Courtyard Snow

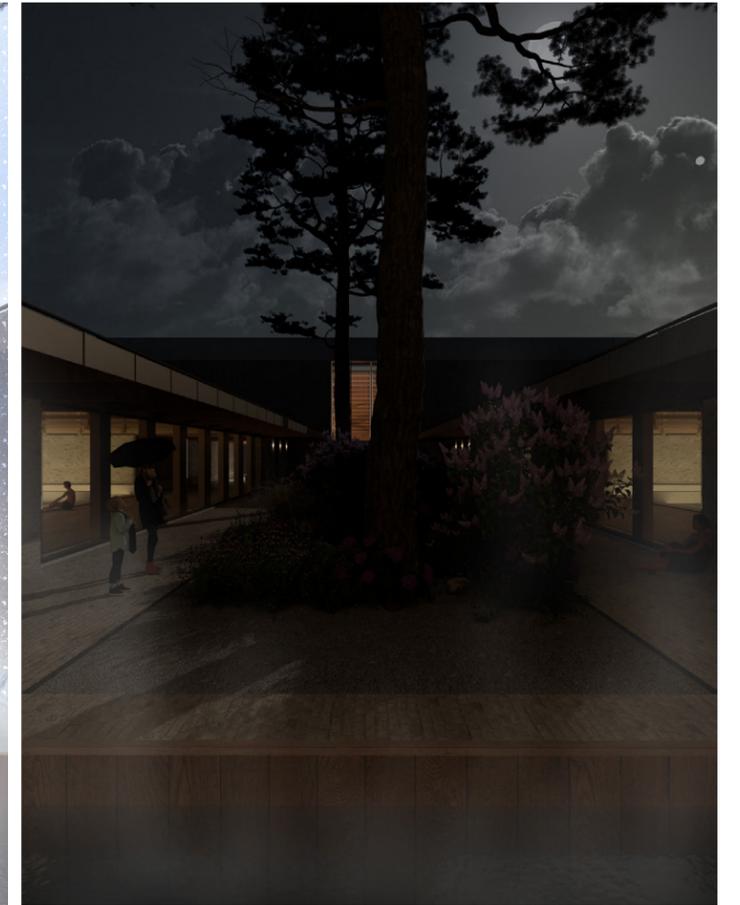


Figure 72 – Courtyard Night

Courtyard

The central courtyard provides a small park oasis where I can either quickly scurry to the other bathing wing or take a rest and ponder the garden. Two baths sit on opposite ends of this space, framing the central growth with baths on all four faces of the courtyard.

Soft lavender aromas waft up during the blooming Spring. Raindrops tap the metal roof and drip down into the sunken central garden to make small reflective puddles. Snow cakes the ground and cools my feet, the steam of the outdoor baths draws me in while the cool chill awakens my senses. At night, the moonlight dances through the trees and a quietness overtakes the space as the Downtown rests. This space becomes part of the weather, meaning the experience of the baths is never quite the same.



Figure 73 – Courtyard Veranda



Figure 74 - Hearth



Figure 75 - Outlook over Lake

Relaxing and Exploring

I can leave the baths at anytime to occupy the relaxation areas and ease back if needed. Both feature seating and hearths to gather around and socialize, with the main lobby's fireplace helping in preparing warm foods for the cafe, while the other wing features a fire that I and others can tend to. Here, I can relax and recover, eat, read or go outside to use Lake Okanagan as another contrasting bath in the summer or winter.

Bibliography

08

- “68% Of the World Population Projected to Live in Urban Areas by 2050.” United Nations. United Nations, May 16, 2018. <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>.
- “Building Sector Emissions Hit Record High, but Low-Carbon Pandemic Recovery Can Help Transform Sector – UN Report.” UN Environment, December 16, 2020. <https://www.unep.org/news-and-stories/press-release/building-sector-emissions-hit-record-high-low-carbon-pandemic>.
- Carlson, Thomas A et al. “Rapid assimilation of external objects into the body schema.” *Psychological science* vol. 21,7 (2010): 1000–5. doi:10.1177/0956797610371962
- Chaiklin, Seth. “The Zone of Proximal Development in Vygotsky’s Analysis of Learning and Instruction.” *Vygotsky’s Educational Theory in Cultural Context*, 2003, 39–64. <https://doi.org/10.1017/cbo9780511840975.004>.
- Christakis, Nicholas A., and James H. Fowler. “The Spread of Obesity in a Large Social Network over 32 Years.” *New England Journal of Medicine* 357, no. 4 (2007): 370–79. <https://doi.org/10.1056/nejmsa066082>.
- Clear, James. *Atomic Habits: An Easy & Proven Way to Build Good Habits & Break Bad Ones*. Penguin Random House, 2018.
- Davis, Wade. *Wayfinders*. House Of Anansi, 2009.
- Duke University Department of Political Science. ““Two incompatible sacred values in American universities” Jon Haidt, Hayek Lecture Series”. YouTube Video. 1:06:22. October 15, 2016. <https://www.youtube.com/watch?v=Gatn5ameRr8>
- Free to Choose Network. “Milton Friedman Speaks – Is Capitalism Humane?” YouTube Video. 45:16. July 31, 2012). https://www.youtube.com/watch?v=27Tf8RN3uiM&t=2079s&ab_channel=FreeToChooseNetwork.
- Gehl, Jan, and Jo Koch. *Life between Buildings: Using Public Space*. London: Island Press, 2011.
- Giedion, Siegfried. “Mechanization of the Bathroom.” Essay. In *Mechanization Takes Command*. New York: O.U.P., 1948.
- Gladwell, Malcolm. *The Tipping Point*. London: Abacus, 2013.
- “Hamartia.” Wikipedia. Wikimedia Foundation, March 14, 2022. <https://en.wikipedia.org/wiki/Hamartia>.
- Hof, Wim. *Wim Hof Method: Activate Your Full Human Potential*. S.l.: SOUNDS TRUE, 2022.
- Jung, Carl G., and Hull R. Carrington. *The Archetypes and the Collective Unconscious*. London: Routledge, 2010.
- Jung, Carl G. *The Symbolic Life: Miscellaneous Writings*. Princeton, NJ: Princeton University Press, 1980.
- Jung, Carl. G. *The Theory of Psychoanalysis*. Charleston, SC: Forgotten Books, 2012.
- Klepeis, N., Nelson, W., Ott, W. et al. *The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants*. *J Expo Sci Environ Epidemiol* 11, 231–252 (2001). <https://doi.org/10.1038/sj.jea.7500165>
- Lieberman, Daniel. “Why Exercise Really Is the Best Medicine.” YouTube. SAR School for Advanced Research, June 23, 2015. https://www.youtube.com/watch?v=8CdoOB-xgoo&t=3017s&ab_channel=SARSchoolforAdvancedResearch.
- Long Now Foundation “The Wayfinders: Why Ancient Wisdom Matters in the Modern World | Wade Davis,” YouTube Video. 1:53:42. June 17, 2020. https://www.youtube.com/watch?v=af_QsG16ixc&ab_channel=LongNowFoundation
- Louisiana Channel. ““Great buildings express their true essence to the world.” | Architect Bjarke Ingels”. YouTube Video. 47:57. December 19, 2017. <https://www.youtube.com/watch?v=dh96J9iXGyk&t=2000s>
- Lurija, Aleksandr R. *The Working Brain: An Introduction to Neuropsychology*. Basic Books, 1997.
- McGilchrist, Iain. *The Matter with Things: Our Brains, Our Delusions, and the Unmaking of the World*. London: Perspectiva Press, 2021.
- MIT OpenCourseWare. “1. Introduction to Theory of City Form”. YouTube Video. 1:09:39. March 6, 2014. https://www.youtube.com/watch?v=k2_wuThLG6o&t=3589s
- Not Just Bikes. “Business Parks Suck (but they don’t have to)”. YouTube Video. 15:42. April 18, 2022. <https://www.youtube.com/watch?v=SDXB0CY2tSQ&t=751s>
- Not Just Bikes. “Why American Cities Are Broke – The Growth Ponzi Scheme [STo3]”. YouTube Video. 9:38. January 11, 2021. <https://www.youtube.com/watch?v=7IsMeKl-Svo&t=174s>
- Osika, Alexandra. “The Myelin Sheath and Myelination.” Kenhub. Kenhub, March 14, 2022. <https://www.kenhub.com/en/library/anatomy/the-myelin-sheath-and-myelination>.
- Pallasmaa, Juhani. *The Eyes of the Skin*. Chichester: Wiley, 1996.
- Parry, S., Straker, L. *The contribution of office work to sedentary behaviour associated risk*. *BMC Public Health* 13, 296 (2013). <https://doi.org/10.1186/1471-2458-13-296>
- Pearson, Christie. *The Architecture of Bathing: Body, Landscape, Art*. Cambridge, MA: The MIT Press, 2020.
- Peterson, Jordan B. “2015 Personality Lecture 05: Constructivism: Jean Piaget”. Youtube Video. 1:13:47. January 21, 2015. https://www.youtube.com/watch?v=ED_TfmwjsEw&ab_channel=JordanBPeterson
- Peterson, Jordan B. “Biblical Series I: Introduction to the Idea of God”. YouTube Video. 2:38:28. May 20, 2017. <https://www.youtube.com/watch?v=f-wWBG06a2w>
- Peterson, Jordan B. *Maps of Meaning*. S.I.: Taylor and Francis, 2002.
- “Physical Inactivity a Leading Cause of Disease and Disability, Warns WHO.” World Health Organization. World Health Organization, April 4, 2002. <https://www.who.int/news/item/04-04-2002-physical-inactivity-a-leading-cause-of-disease-and-disability-warns-who#:~:text=Sedentary%20lifestyles%20increase%20all%20causes,lipid%20disorders%2C%20depression%20and%20anxiety>.
- Postman, Neil. *Technopoly: The Surrender of Culture to Technology*. New York N.Y.: Vintage, 1993.
- Rogers, Carl R. “The Necessary and Sufficient Conditions of Therapeutic Personality Change.” *Journal of Consulting Psychology* 21, no. 2 (1957): 95–103. <https://doi.org/10.1037/h0045357>.
- RSA. “Antifragile – Nassim Nicholas Taleb”. YouTube Video. 19:19. January 9, 2013. <https://www.youtube.com/watch?v=k4MhC5tcEvo>
- “Shinto.” Asia Society. Accessed January 2, 2022. [https://asiasociety.org/education/shinto#:~:text=Shinto%20\(literally%20E2%80%9Cthe%20way%20of,relation%20with%20the%20human%20inhabitants](https://asiasociety.org/education/shinto#:~:text=Shinto%20(literally%20E2%80%9Cthe%20way%20of,relation%20with%20the%20human%20inhabitants).

Simek, Peter, Catherine Wendlandt, and Matt Goodman. “We’re Still Trying to Understand Why New Apartments Are so Ugly.” *D Magazine*, December 13, 2018. <https://www.dmagazine.com/frontburner/2018/12/were-still-trying-to-understand-why-new-apartments-are-so-ugly/>.

Simons, Daniel J. “Inattentive Blindness.” *Scholarpedia*, 2007. http://www.scholarpedia.org/article/Inattentive_Bindness#:~:text=Inattentive%20blindness%20is%20the%20failure,task%2C%20event%2C%20or%20object.

Sprouts. “Piaget’s Theory of Cognitive Development”. YouTube Video. 6:55. August 1, 2018. <https://www.youtube.com/watch?v=IhcgYgx7aAA>

Stewart, Martin, and Remi Allard. *A Revised Geological Model and Hydrostratigraphic Framework for the Kelowna-Mission Aquifers*. Gov.BC, 2018. https://a100.gov.bc.ca/pub/acat/documents/r54469/WSS2018-03_Mission_Ck_1532284001708_2278704448.pdf.

TED. “Daniel Wolpert: The real reason for brains”. YouTube Video. 19:59. November 3, 2011. <https://www.youtube.com/watch?v=7s0CpRfyYp8&t=64s>

TED. “The power of ritual | Dimitris Xygalatas | TEDxAthens”. YouTube Video. 17:30. April 1, 2016. https://www.youtube.com/watch?v=IrjCLvSQ_cw

“Terrace (Geology).” *Wikipedia*. Wikimedia Foundation, November 28, 2021. [https://en.wikipedia.org/wiki/Terrace_\(geology\)](https://en.wikipedia.org/wiki/Terrace_(geology)).

“The Information Glut.” *Technorealism – understanding the limits of information*. Stanford. Accessed January 5, 2022. <https://cs.stanford.edu/people/eroberts/cs181/projects/technorealism/glut.html?fbclid=IwAR29fA4yगतfaUa6e-JWnPzSQzUseSUMSGojWNTRJ5xqVRHesoqXVxepgoCs>.

Tokyo Noise, 2002. <https://www.youtube.com/watch?v=kgiM9USoUXQ>.

Viherjuuri, H. J. *Sauna: The Finnish Bath*. Greene, 1978.

Vujosevic, Tijana. “The Soviet Banya and the Mass Production of Hygiene.” *Architectural Histories* 1, no. 1 (2013): 26. <https://doi.org/10.5334/ah.az>.

Waxenbaum JA, Reddy V, Varacallo M. *Anatomy, Autonomic Nervous System*. July 29, 2021. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK539845/>

Wilkinson, Tom. “Horai Onsen by Kengo Kuma, Atami-Shi, Japan, 2003.” *Architectural Review*, May 14, 2021. <https://www.architectural-review.com/buildings/horai-onsen-by-kengo-kuma-atami-shi-japan-2003>.

Wilson, Colin. *New Pathways in Psychology: Maslow and the Post-Freudian Revolution*. London: Victor Gollancz, 1979.

What I’ve Learned. “Why Exercise is so Underrated (Brain Power & Movement Link)”. YouTube Video. Dec 17, 2016. <https://www.youtube.com/watch?v=DsVzKCKo66g>