# From the mountain to the cesspit: (re)inserting scale and temporality in heritage studies by walking the megalopolis

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**“Herfra hvor vi står**
**Kan vi se os omkring - til alle sider**
**Det bevæger sig når vi går**
**Det forandrer sig i alle tider”**

[“From here where we’re standing
we can look around – to all sides.
It moves, when we walk
It changes at all times”]

Skousen & Ingeman, “Herfra hvor vi står”, Copenhagen, Denmark, 1971

**Abstract**
By conceiving of heritage as social processes of citizens in relation to their surroundings, (Harvey, 2001: 320) we will make a case for (re)inserting large-scale temporal and spatial dimensions – *la longue dureé* – in urban heritage practices. Arguments will be built on findings from a three-day hike of a cross-section of Mexico City, documenting the flow of water through the urban landscape and the socio-political layers of the city. Mexico City seems to be in a constant state of fragility; the destruction caused by the September 19th, 2017 earthquake follows the shape of what was once the lake of Texcoco, on which the Aztecs built their capital. Colonial maps show that although the original layout of the city was respected, the aquatic structure disappeared. Rapid urbanisation, climate change, population growth and neoliberal politics have recently increased this precarious situation.

According to Paul Ricoeur, the premises of contemporary heritage theory require differentiation between scales of history; microhistory and individual memory are set in opposition to macrohistory and collective memory. (Ricoeur, 2004: 131) However, individual and collective memories cannot be separated if we understand how water plays a vital role not only in connecting segregated parts of the city but also as a *longue dureé*, connecting the city to its past.

Recognising water as a carrier of collective memory in Mexico City allows promotion of alternative narratives and politics, that unite cultural rights with the laws of nature, in order to facilitate more inclusive approaches in urban heritage practices.


Note: all pictures are part of the personal archive of the authors, if not mentioned otherwise.

## Introduction

Efforts to visualise any given geographical area equal the production of maps. The map on its part then becomes a product of the world vision of the subject doing the mapping. In other words, this process becomes a circular, hermeneutic dynamic that re-enforces worldviews with the mapping subject at its centre. In an effort to produce a new mapping practice that would enable us to envision the problems of the urban environment, we have changed the subject position of this process in order to bring complex environmental, social and cultural issues front and centre. In our specific case, we opened space for new narratives by allowing water to draw a map of Mexico City, by walking along its routes through a cross-section of the city.

Sjamme began his research career as a historian, Moniek as a designer. Both have moved through these disciplines into the field of memory studies, and in the summer of 2017, after Moniek had conducted the first phases of a design research project in collaboration with the Mexico City-based design studio Primal, we walked from Santa Catarina del Monte, located in the mountains east of Mexico City, to the *Cárcamo de Dolores*, a waterworks marked with a sculpture by Diego de Rivera in the western side of the megalopolis. For three days, we walked, taking our point of departure in a natural spring hidden away in the forest on the mountain, passing the *Baños de Nezahuacoyotl*, the baths from where pre-Colombian rulers oversaw the valley of Tenochtitlan, following the path of the rivers now covered by asphalt motorways, passing flooded neighborhoods like Iztapalapa, crossing the boundaries of black waters reeking of decay and starch social division between the permanent provisional settlements with expensive plastic water containers on roofs and the cafés where water is an invisible ingredient in the café latte served to oblivious cosmopolitan hipsters in La Condesa. Our experiences, photos, and field notes have since inspired a short story, a festival performance, a sculpture and a syrup made with plants and fruits found on our way – all telling the transcendental story of water in the city.

Baños de Nezahuacoyotl.

It is this collaborative, trans-disciplinary and transitional methodology that we will try to describe in this contribution. Through our walk, we did not only gather data in the form of photographs, commentaries from residents, and observations on the socio-economic divides that water creates in the megalopolis and the long memories that govern them, but we also opened up a field where creative re-imagination of these systems becomes possible. If we briefly define imagination as the mental faculty to make the absent present, this requires that we think of the absent in both time and space. These approaches have their own particular theoretical framework, which we aim to define in this paper, going through the appropriate memory theory and the possible spaces this opens up for creative practices.

**Numbers and facts: concealment in complexity**

In Mexico City, waterways were historically the means of transportation and connection between communities. With the introduction of modernistic and neo-liberal thought, water has both united and separated people.

Mexico City is a city of many complexities; economic, social and cultural layers criss-cross the city's many districts. Accounting for its population alone gives you a headache: according to the CIA World Factbook, 20.999 million people live in the city as of April 2018.[1] According to the UN, this number was 21.157 million in 2016.[2] No matter how the final tally is made up, no matter who we chose to include and exclude, and which political lines we choose for our demarcation, we end up with one of highest numbers of people living in one city on the planet, all living 2.250 meter above the sea level – and all these people need water to live, meaning that, following the water in Mexico City, you will be lead through many of its social layers.

The hydro-engineering system that transports these billions of litres of water is perplexing. Water travels more than 100 kilometres through underground pipes. When water pressure is too low or other emergencies occur, water trucks – the so-called 'pipas' – take over; "*I've done this job for 12 years and there have only been two occasions when the pipe pressure was good enough to ensure we didn't have to work*," pipa driver Adrian Vasques told The Guardian reporter Jonathan Watts in 2015.[3]

The socio-economic system that this produces is equally complex. In 2000, more than 5% of people living in Mexico City did not have access to water (access here however broadly defined as home access or from common faucets in the neighbourhood) and spend between 6% and 25% of their salaries on purchasing water. Add to this a (justified) universal distrust in the quality of tap water, which leads most people to purchase water in 20/30 litre containers – adding commercial interests to the mix, with the powerful lobby that comes along with that.[4] These corporate efforts can be roughly divided into political efforts to deter improvement in water supply and marketing efforts to ensure that the governing public perception remains sceptical of water that does not come in a plastic bottle.[5]


< A so-called 'pipa' in Ciudad Nezahuacoyotl.

1. Central Intelligence Agency. "North America: Mexico". *The World Factbook*. https://www.cia.gov/library/publications/the-world-factbook/geos/mx.html (accessed 10.07.18)
2. United Nations. *The World's Cities 2016*. http://www.un.org/en/development/desa/population/publications/pdf/urbanization/the_worlds_cities_in_2016_data_booklet.pdf (accessed 10.07.18)
3. Watts, Jonathan. *The Guardian.* "Mexico City's water crisis – from source to sewer". (November 12th 2015). https://www.theguardian.com/cities/2015/nov/12/mexico-city-water-crisis-source-sewer (accessed 23.04.18)
4. Tortajada, Cecilia. "Water Management in Mexico City Metropolitan Area". *Water Resources Development,* (Vol. 22:2). (June 2006). p. 361
5. Pacheco-Vega, Raúl. "Agua embotellada en México: de la privatización del suministro a la mercantilización de los recursos hídricos". *Espiral: Estudios sobre Estado y Sociedad*, (Vol. XXII No. 63). (May/August, 2015). pp. 249-2506.

In 2010, the UN recognised the right to water as human right, emphasizing that this means that supply should be sufficient (meaning: at least 50 litres), safe (of a quality fit for human consumption, as defined by the WHO[6]), acceptable (meaning that the colour, smell and taste should be appropriate to cultural norms), accessible (within a 1 km or 30 minutes distance from home) and affordable (the suggestion is that water should not exceed 3% of a household's income).[7] In the reform of the constitution in 2012, the Mexican government inscribed the human right to "*access, provision and drainage of water for personal and domestic consumption in a sufficient, healthy, acceptable and affordable manner*".[8] Furthermore, Mexican law recognises the biological diversity and the socio-cultural rights of the indigenous population related to their ancestral relation to the land. This is stipulated in the Indigenous and Tribal Peoples Convention signed by the Mexican government in Geneva in 1989.[9] In Mexico City, the relation to water of these communities is here front and centre in many aspects; the protection of the waterways is crucial to the preservation of cultural identity and ancestral traditions of food production. In conclusion, the issue of water is addressed in various legal bodies with variations on the degree to which water is considered a human right[10] – which obviously causes confusion.

This legal protection clashes with the commercial interest in water supply – both the suppliers of bottled water, but also the companies that receive the government contracts to provide public services – which has led to several protest movements dealing with these issues.[11] These many legal criteria contradict each other on many levels, and are far from met: bringing water from faraway violates the rights of indigenous communities;[12] the groundwater deposits are emptied with no ways for replenishment due to the asphalting of the city – which paradoxically causes flooding when it rains; and rainwater is drained through the same system as the notorious 'black waters'.[13] This means that sufficiency and accessibility are rendered nil as the water supply is directed towards areas with higher economic levels, as well as commercial, industrial and touristic areas of the city.[14]


> 'Black waters' Borde de Xochiaca.

6. World Health Organization. *Guidelines for drinking-water quality, 4th edition*. (Geneva: WHO, 2011). pp. 3-7
7. Resolution A/RES/64/292. (United Nations General Assembly, July 2010); General Comment No. 15. The right to water. (UN Committee on Economic, Social and Cultural Rights, November 2002)
8. Political Constitution of the United Mexican States. Title I, chapter I, article 4.
9. CI69 - Indigenous and Tribal Peoples Convention, 1989 (No. 169). *ILO: Convention concerning Indigenous and Tribal Peoples in Independent Countries*. http://www.ilo.org/dyn/normlex/en/f?p=NORMLEX-PUB:12100:0::NO::P12100_ILO_CODE:CI69 (Accessed 09.07.18).
10. Fondo para la Comunicación y la Educación Ambiental. "Legislación del Agua: Constitución Política". https://agua.org.mx/legislacion-del-agua/ (Accessed 09.07.18).
11. Coalición de Organizaciones Mexicanas por el Derecho al Agua. *Informe sobre violaciones a los Derechos Humanos al Agua Potable y al Saneamiento en México.* (2017). http://www.comda.org.mx/wp-content/uploads/2017/05/INFORMEDHAyS-para-paginas.pdf (accessed 23.04.18)
12. CEMDA. *Informe sobre la situación de los derechos de los pueblos indígenas en México*. (Mexico City November 8 2017). http://www.cemda.org.mx/wp-content/uploads/2011/12/Informe-sobre-los-derechos-de-los-pueblos-ind%C3%ADgenas-en-M%C3%A9xico_COMPLETO_FINAL-2PM.pdf (accessed 10.07.18)
13. Urbanisten. *Towards a Water Sensitive Mexico City: Public Space as a Rain Management Strategy.* (Rotterdam, 29 June 2016). p. 66
14. Heller, Leo. "Declaración de final de misión del Relator Especial sobre los derechos humanos al agua y al saneamiento". The Office of the United Nations High Commissioner for Human Rights, declaration given in Mexico City, 12 May 2017. http://www.ohchr.org/SP/NewsEvents/Pages/DisplayNews.aspx?NewsID=21608&LangID=S (accessed 23.04.18)

These areas are by and large to be found in the western part of the city, which incidentally is also the side from which the water enters the city through the hydro-engineering works described above. This gives Mexico City a peculiar West-East scale, based on how far you get from the source of the water supplied through this system; the richest golf courses in the city furthest out west (with water pressure of 14 kg per square centimetre), the commercial and high class districts of Polanco and Benito Juarez closer to the center (with water pressure around 7 kg per square centimetre and occasional shortages), and Iztapalapa in the east (with water pressure around 500 g per square centimetre and taps that are more often dry than not).[15] Finally, large parts of the western neighbourhoods like Iztapalapa and Nezahualcoyotl are made up of informal (often illegal) settlements on land reserved for other purposes. The political battle in these places also becomes related to water, as the government is caught between contradicting laws when in recognising these settlements, as that, in turn, would mean that they qualify for water supply under national and international law.[16]

Even geological phenomena add to this complex situation; when the Spanish conquistadors arrived at what today has become Mexico City, they found an Aztec city called Tenochtitlan, built on a lake in the middle of a valley. As it was both an established power centre, in the middle of a lake that provided protection and with buildings that suited the establishment of colonial control.[17] The colonization of this space meant that the imperial power imposed its architectonic worldview on the city, building roads where there were once rivers, drying up the lake of Texcoco.[18]

To conclude this contextual introduction, Mexico City relies on a combination of four supply systems of water for personal use:

~ Water from the tap
~ Drops from above
~ Pre-existing water
~ Commercial supply

Together, these systems have proved to generate an entangled problem on many scales, but above all the system is non-transparent and information is hard to acquire, as the provision of water in Mexico City is considered a national security issue. A second conclusion goes beyond this techno-cratic approach to the imaginaries that these water systems carry along with them; water is a human right.

Based on these conclusions, we went walking to see if we could make sense of the socio-cultural reality that this produces, not only asking ourselves whether the human right to water really was met but also where the water was in the city, where it was from, and whether answering these questions could be an initial step towards giving water a place in the city's environmental rights as well as people's right to the city. Our walk was a physical passage through dichotomies and an effort to connect and diffuse them; what we found was so much more.




Commercial supply of water.

15. Watts, Jonathan. *The Guardian*. "Mexico City's water crisis – from source to sewer". (November 12th 2015) https://www.theguardian.com/cities/2015/nov/12/mexico-city-water-crisis-source-sewer (accessed 23.04.18)
16. CEMDA. *El agua en México: lo que todas y todos debemos saber.* (Mexico City, 2006). https://www.cemda.org.mx/wp-content/uploads/2011/12/agua-mexico_001.pdf (accessed 10.07.18)
17. Candiani, Vera S. *Dreaming of Dry Land: Environmental Transformation in Colonial Mexico City.* (Stanford, CA: Stanford University Press, 2014). pp. 26-27
18. Ibid. pp. 49-50

**Exposing the concealed: three maps**

In order to walk through the vast urban space that is Mexico City, we needed to be able to orient ourselves in time and space – we needed maps to base our new map on.

In the university town of Uppsala, Sweden, a mysterious map of Mexico City is put on display in the basement of the University Library. Dated back to 1550, this is one of the first maps of the city, dedicated to Spanish king Carlos V. There are several aspects of the map that add to its mystical qualities; firstly it is unknown how the map made it from Mexico to the cold heights of Sweden. One theory is that it was part of the war booty taken by Swedish soldiers when they sacked Prague - which was part of Carlos V's Habsburg empire - during the 30-years war. Another theory is that it was acquired in Spain for the Swedish crown by Johan Gabriel Sparwenfeld, who in 1689 embarked on a mission to find historical documents. Another issue that adds to the mystery is its authorship; It was first believed to have been drafted by the Royal Spanish cosmographer, Alfonso de Santa Cruz, but later investigations have proved that Santa Cruz impossibly could have been in Central America at the time, and furthermore, the map is full of symbolisms that suggest that it was made by a person of indigenous origins with Spanish education.[19]

19. Medina, Carmen. "De Tenochtitlan a Uppsala – La historia del Mapa de México". *Actas del I Coloquio de Cultura Mexicano*. (University of Uppsala, 15-20 October 2007). pp. 1-9 http://www.naua.se/Mexico07/Pub/Documentos/Carmen_Medina_P.pdf (accessed 03.07.18)

Uppsala Map of Mexico City, 1550.

Central in the map we see Tenochtitlan, built in the middle of lake Texcoco, and surrounded by its various tributary rivers. One of the many amazing aspects of this map is that it not only depicts spatial relations but that it through its portrayal of people doing various tasks tells us the importance of these places; we see people in boats travelling, fishing, catching seabirds and transporting merchant goods. We know that the indigenous population did not necessarily live in harmony with the fluid elements, as flooding and saline buildups were recurrent threats to survival on the lake. However, the Aztec state managed to develop a savvy water management system to convert these adverse circumstances into advances. With the arrival of the Spanish colonists, the Aztec bureaucracy necessary to maintain these systems was eliminated, and new agricultural production introduced. It has to be said that this process was not introduced immediately after the conquest of Tenochtitlan, as the colonial rule (most likely unwittingly) protected the water systems by only granting land rights to arriving Spanish settlers – rights over irrigation and thereby waterways remained relegated to the indigenous population.[20] In October 1607 however, after the Spanish colonial rule was firmly established in the Mexican colonies, Viceroy Luis de Velasco the Younger ordered the drainage of the lake, as this was "*...how things are done in Genoa, Venice, and other cities in Italy and the states of Flanders for the conservation, provisioning and order of the republic*".[21]

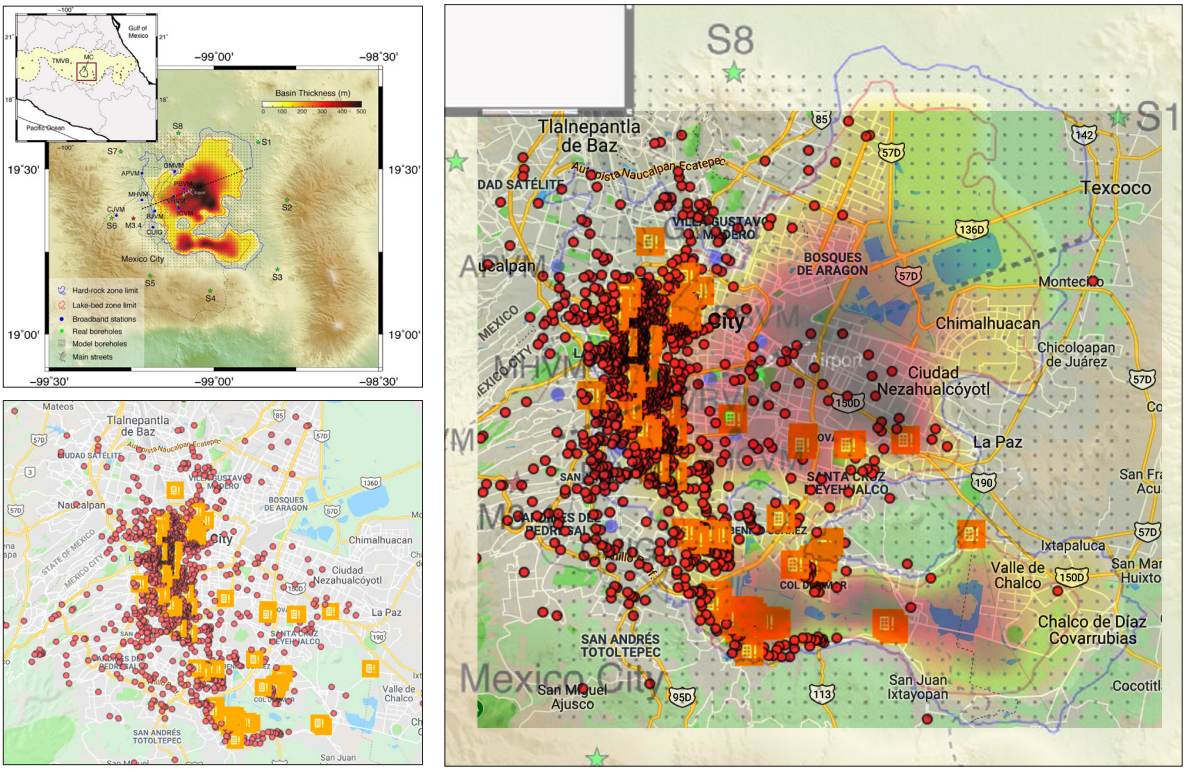
Due to the imposition of these early modern modes of thought onto the pre-colonial urban space, Mexico City changed its relation to its aquasphere in dramatical ways. The Prussian explorer and cartographer Alexander von Humboldt arrived there in April 1803 and noticed the particularity of how the waterways of Mexico City played a vital role in the city's infrastructure. He noticed furthermore how the lake of Texcoco was drying out, and that commerce on the lake died out 'in the dry months'. The many passages in his *Political Essay on the Kingdom of New Spain* dedicated to the drainage of the lake, and the concerns voiced over its social and geological ramifications – aided by interviews with the indigenous population – show how the city already at this point struggled with flooding, as well as lack of water.[22]

20. Candiani, Vera S. *Dreaming of Dry Land: Environmental Transformation in Colonial Mexico City.* (Stanford, CA: Stanford University Press, 2014). pp. 15-16 & 43-45

21. Ibid. pp. 49-51

22. Humboldt, Alexander von. *Ensayo Político sobre el Reino de Nueva España* (libro III). (Paris, 1822). p. 414-425


> Alexander von Humboldt's "Carte De La Valle De Mexico" 1808. David Rumsey Historical Map Collection. Pub List No: 0328.005.




Overlay of a geophysical map of Mexico City and a map of the destructions after the September 19th 2017 earthquake.

Skipping 213 years ahead in time from 1804 to the final of the three maps that explain our route through the city, we are connecting the hydrosphere of Mexico City to the shivers of the earth. On September 19th 2017, Mexico was hit by an earthquake that inflicted devastating damage to large areas of Mexico City. A study carried out by a group of geophysicists led by Víctor Cruz-Atienza produced a simulation model of the increasement of ground movement during earthquakes in the areas previously covered by the Texcoco Lake.[23] The crowdsourced effort to locate the destruction of the earthquake, VerificadoI9s, shows that when these predictions sadly came true, the destruction of housing predominantly followed the contours of the vanished lake.[24] This clarifies that the lack of access to water in CDMX is not only a symptom of inequality, but that the larger structures of water in their current mapping paradigms also produce inequality.

**Theorising: beyond the metaphorical map**

In synthesis, the three maps discussed above are fascinating images of how space was conceived in three different moments in time. Our aim, however, was not to produce a synchronic map, but rather a map that would allow us to imagine multiple time scales and spatial relations in one narrative.

The first clarification we need to make here is our understanding of the word 'imagination' – which we will define by turning to Swedish geographer and multifaceted philosopher Gunnar Olsson. Paraphrasing Immanuel Kant, Olsson defines imagination as the human faculty used to make the absent present. Thereby, it is both the faculty used to call forth places that are not 'here', but also the faculty used to call forth places that are not 'now'; to re-member perceptions of the past and expectations for the future, both of which are by definition never present.[25]

23. Cruz-Atienza, V. M; Tago, J; Sanabria-Gómez, J. D; Chaljub, E; Etienne, V. et al. "Long Duration of Ground Motion in the Paradigmatic Valley of Mexico". *Scientific Reports.* (Springer Nature, Dec 9, 2016). Available via: https://www.nature.com/articles/srep38807 (accessed 03.07.2018)
24. Márquez, Alma Gabriela et al. "VerificadoI9s". http://www.verificadoI9s.org/ (accessed 03.07.2018)
25. Olsson, Gunnar. *Abysmal: A critique of cartographic reason.* (Chicago: The University of Chicago Press, 2007). p. 120

For a discussion about the interpretation of past, present and future in social relations, we will apply terms from the discipline of memory studies. Turning towards scholars of history and memory, you are often faced with either a discussion of where the limits between these two disciplines are situated or a discussion that muddles the two terms without any clear idea about the meaning of each individual concept. The latter is more often than not the case in studies related to Latin America.[26] One scholar who most clearly exemplifies this trend is Paul Ricoeur, who in his seminal work *Memory, History and Forgetting* to a large extent argues for the sociability of mnemonic dynamics and the layering of truths about the past in socio-cultural structures, but whose argument eventually ends up dividing memory and history into hierarchical, mutually exclusive structures:

> *" ... the problems posed by the sociology of collective memory will be reformulated by historians in connection with the temporal dimension of social phenomena: the layering of long, middle, and short-term time-spans by Braudel and the historians of the Annales school, as well as considerations regarding the relations between structure, conjuncture, and event all belong to this re-newed interest on the part of historians in problems faced by sociologists on the level of collective memory. The discussion will thus be resituated on the border between collective memory and history. [...] In this regard, history will offer schemata for mediating between the opposite poles of individual memory and collective memory."*[27]

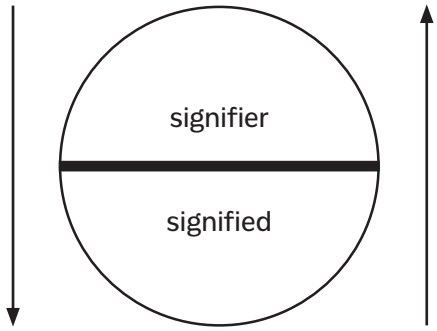
The theoretical position of our work is radically opposed to this argument, and rather influenced by the work of Jan Assmann, who sees memory as a collective and social phenomenon, but does not agree with the distinction between memory and history: "*The subject of memory and recollection will of course always remain the individual, as dependent as he/she may be on the "frame" that organizes them.*" The keyword here is the 'frame' or the social structure. The crucial difference to the conception by Ricoeur of the dynamic of cultural memory is its re-interpretation by what Assman calls 'institutions and carriers': certain 'high priests of memory' – such as historians and heritage professionals – are given the power to interpret and communicate a memory that is more true than others.[28] To give this mode of thought a spatial dimension, we glance towards Gunnar Olsson again:

> *"The map of semiosis ties memory and mimesis together through activities which are essentially spatial. The function of place-bound metaphors is consequently to awaken the store of collective memories from their metonymic slumber, because to learn something new is to reconnect to something old. The self conversing with its likes in the Bar-in-Between is always a self in the making, for the limit of an object (regardless of whether that object is material or conceptual) is intrinsic to its being."*[29]

26. See for example the edition of the Harvard based journal *Revista* dedicated to memory: Erlick, June (ed.). *Memory: In Search of History and Democracy.* (Harvard, fall 2013). https://revista.drclas.harvard.edu/book/memory-fall-2013 (accessed 04.07.2018)
27. Ricoeur, Paul. *Memory, History and Forgetting.* (Chicago: The University of Chicago Press, 2004). p. 131
28. Assmann, Jan. "Cultural Memory: Script, Recollection, and Political Identity in Early Civilizations". *Historiography East & West* (1:2). (Leiden, 2003). pp. 163-164
29. Olsson, Gunnar. *Abysmal: A critique of cartographic reason*. (Chicago: The University of Chicago Press, 2007). pp. 109-110

This quote reflects the dense language of Olsson's *Abysmal*: in just five lines, five concepts of incredible complexity are introduced: semiosis, memory, mimesis, metaphor and metonymy. With semiosis, Olsson refers to the interpretation of Umberto Eco of Charles Peirce's theory of endless semiosis in a string of utterance, interpretation by a subject, re-utterance and reinterpretation. Olsson's conception of memory is therefore much like Assmann's: The metaphorical representation of truth - metaphor here understood as a sign that represents something else, in this case, a narrative in the present that represents a truth in the past. As metonymy refers to the representation that happens between a sign and a meaning that is closely aligned, the interpretation by Olsson of spatial phenomena as signs means that they have metaphorical and metonymic meaning – proposing that a map can have multiple meanings. A line on a piece of paper could thus metaphorically be interpreted as a street in synchronic space. Simultaneously, the map could acquire a metonymic meaning, as the outline of a former lake initiates a semiosis of meaning in diachronic space, leading thoughts back to the days where a lake was present, and a future where it is completely absent, leaving the city without any sources of water.

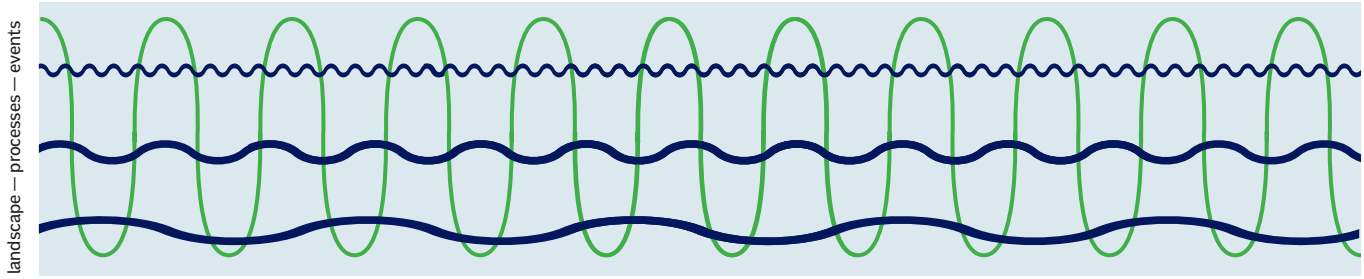
Both scholars are however concerned with synchronic/diachronic modes of analysis. In Ricoeur's work, this is evident through his focus on the Annales School's division of historical structures into short, medium and long-term durational phenomena based on Ferdinand de Saussure's synchronic analysis of structures based on the linguistic concept of 'the sign': the relation between the signifier – the utterance of meaning – and the signified – the real-world concept referred to by the utterance. Olsson's Saussurean focus lies on the 'bar-in-between' – the dividing line between Saussure's signifier and signified, where utterance and concept are most closely related, such as is the case with promises and hope. Annales School historians have sought out this structural mode of thought by looking for the long-term aspects of human society – the *longue dureé*.[30]




If we accept that the past is conceptualised socially through the re-membering of meaning based on representations of truth, then the map becomes the most basic representation of the longue dureé, and the metonymic interpretation of the map one that can open spaces for hope and promise. If we allow the paradigm guiding the three maps described above to be the only one we use to address the problems surrounding water in Mexico City, and relegate the interpretation of it to an intellectual elite of planners, architects and other people, however well willing, we create a storage space of cultural memory in semiotic closure that will assert itself as ideological hegemony with little room for hope.[31]

30. See the most notoriously famous Annales School work: Braudel, Fernand. *The Mediterranean and the Mediterranean World in the Age of Philip II.* (University of California Press, 1996).

31. Eagleton, Terry. *Ideology: An Introduction.* (London: Verso Books, 1991). pp. 196-199



Below some of the photos we took walking from Mount Tlaloc to the Cárcamo de Dolores.

**Walking along mnemonic lines, or how we created our own map**

Carrying little more than one change of clothes, our water bottles, camera and smartphones, we embarked on our walk from a natural spring on a peak near Mount Tlaloc, from which the water is distributed to the entire town of Santa Catarina del Monte. We photographed every reference to water we saw, made notes on our phones and measured our route using a smartphone application that geo-tracked our movements on a map as well as with an altimetre that traced our descent into the valley of Mexico City.

Our first experience on the hike was the encounter with an elderly man who called himself Don Anastasio. After assuring that we were not emissaries of a company that wanted to exploit the spring that provided the water to his village, he showed us the way. As the clouds gathered over the mountains and the rain began to fall, we followed the streams next to the asphalt roads. Walking downhill towards Mexico City from Santa Catarina del Monte, we noticed very soon how the first water trucks entered the scene, and water no longer was valued as a public good, but priced, bottled, transported and sold. When we reached Texcoco, the satellite-city to Mexico City named after the ancient lake where we had planned to stay the night, communal water was nowhere to be found, and advertisement for bottled water and sodas adorned public buildings.

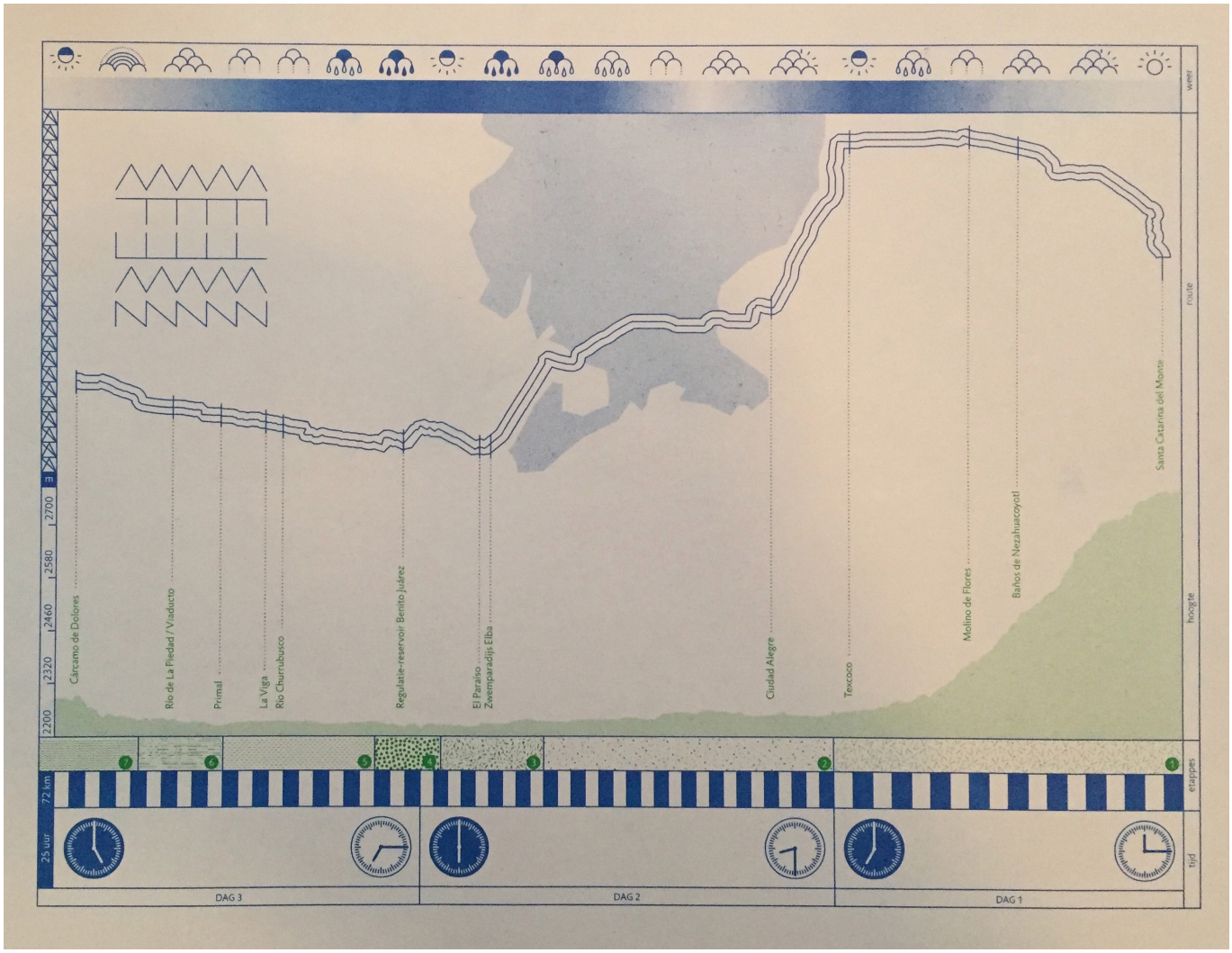
On our second day of walking, we entered the megalopolis after a long and dusty trek dangerously close to the highways that have taken the place of the tributary rivers to the old lake. We noticed how the vegetation changed and diversity decreased to a few succulent plants and the Peruvian Peppertree, or Pirul, with its tiny red fruits. We harvested plants and fruits along the way and had our backpack full by the end of the trip. We saw how water travelled in bottles and water trucks, while plastic remained as fossils along the roads, leading to the heart of a wasteland of burning landfills. Although the day had begun with a burning sun that dried up the dust to whirl up into the smoggy atmosphere, the rain returned to convert the roads of the once lake city into shimmering, black, foul rivers. Efforts to drain the water out of the way from the cars that roamed what were once rivers became canals of reeking gloom, crossed by people moving from one informal settlement to the other. These settlements lacked basic structures such as lights, pavements and road signs. The closer we came to Mexico City proper, the more houses in the settlements were equipped with electrical wiring and a few even with what looked like cables for internet connection. All of them, however, had a large water tank on the roof to provide water in the home – more often than not distributed by water trucks that can barely fulfil demand. When the system fails again, the highest bidder finds his tank full. Rainwater ran towards the lowest point of the basin, stagnating in abundance, flooding roads and squares while citizens remained dependent on the trucks bringing water to their homes.

The final stretch of our journey took us from the towering Peñon Viejo in Iztapalapa, with its slopes covered with the latest settlements, passing El Balneario Elba – a decaying water park – and moving from the outskirts into Mexico City. Clean water destined for public use was poured into cement mixers and used for further concrete construction

– the highest bidder at the moment. Along roads named after former waterways, we passed behind the Central de Abastos – the immense central from which food products are distributed in the megalopolis, and where hills of discarded plastic bottles are guarded by federal agents who turned us away. As we descended deeper and deeper into the city, water was increasingly hidden neatly away under giant highway constructions, water sprinklers in parks, 'authentic' artisanal coffee-experiences and of course in the colourful bottles of water and soda distributed everywhere.

We ended our 73 kilometres-long trip at the Cárcamo de Dolores – the waterworks built by famed engineers in 1951 to provide the entire city with water. The museum built above the pipes hosts murals by Diego de Rivera, and in front of it a statue by the same artist depicts Tlaloc, the Aztec god of heavenly waters, is watching the skies and the engineering works, both with admiration and fear. That evening we had a recovery dinner in the famed neighbourhood La Roma, overrun by tourists. Here we overheard a group of US visitors describe how they after living in the city for a year were delighted about the authenticity of the plentiful fresh products.


A map of our walk printed with the eco-fictional fable written by Mauricio Martínez.



Public reading of the eco-fictional fable written by Mauricio Martínez.

**Mapping hope: heritage producing counter narratives**

We walked the waterways of Mexico City in order to document the connections and connectivities of the flow of water. Through our lenses of memory studies, we interpreted water as heritage – not only referring back to the times before Tenochtitlan was overtaken by the Spanish Empire, but also to the recent times of the construction of informal settlements and into a future, where the range of possible actions decreases dramatically. This kind of narrative is not only the source for gloomy science fiction, but by addressing the implications of teleological narratives of apocalypse brought about by repeating environmental crisis, we align closely with Marxist geographer David Harvey's thoughts on the need for a narrative "*To construe ourselves as active agents caught within the "web of life" is a much more useful metaphor than the linear thinking that has us heading of a cliff or crashing into a brick wall.*"[32] Teleological thinking narrows the scope of possible actions taken from a simultaneously narrowing imaginary.

This metaphorical, dystopian interpretation of our map is rather hopeless, which is why Moniek turned to a collaboration with cultural practitioners in other strata than academia to allow them to reflect on our photos, notes and stories to experiment and provide us with new ways of narrating water in the city. This was made possible through Moniek's pre-existing network of contacts both in Mexico and the Netherlands. One of the results of this was an eco-fictional fable written by Mauricio Martinez, narrating the story of a thirsting city drowning in rainwater. Another result was a series of festival performances in Rotterdam, The Netherlands, in the summer of 2017. In collaboration with craftsman Sander Huijzer, a lifeboat came into being and with performance artist Ilse Evers an interaction that modified the lifeboat into a converter that transformed water from the canals into potable water. Mixed with a syrup that culinary artist Maidie van den Bos had created from the plants and fruits that we had collected along our trail, festival guests consumed our journey both literally and figuratively. Allowing our map these metonymic interpretations, by interpreting water in the city as cultural heritage, opened up for a wide range of possibilities for reimagination of the social and cultural values that it carries.

32. Harvey, David. "Marxism, Metaphors, and Ecological Politics". *Monthly Review: An Independent Socialist Magazine* (Volume 49, Number 11). (April 1998)https://monthlyreview.org/1998/03/01/marxism-metaphors-and-ecological-politics/ (accessed 09.07.18)

Water installation and performance made in collaboration with Ilse Evers.

In the performances at Dutch festivals, we noticed how the fragile state of water in Mexico City immediately resonated with audiences and participants – we discovered that water is global and local at the same time. This is why we are not proposing a repetition of for example Diego de Rivera's murals and statue at the Carcamo de Dolores as a monument designated to freeze the interpretation of water at a synchronic point in time and space, but rather an inclusive memorial practice that produces space for hope.

**Mapping our map: noticing mnemonic connections and making heritage**

The re-interpretations of water in the city that are possible in the space of hope that came forth through this method are many, and discussions of these meetings across disciplines are expected to fill the pages of Moniek's forthcoming book, based on her design research in Mexico. In this book, we hope that various voices, in the words of Olsson, can converse with their likes in the Bar-in-Between, and continue the semiosis set into motion by our walk. For now, we hope with the last paragraphs of this essay to address the importance that walking had in our understanding and re-envisioning of water in the city. We find that our method goes beyond being merely a circular hermeneutic vision from the theoretical perspective of Heidegger and Gadamer, but as a multifaceted tool of spatial imagination.

The opening up of the long structures of memory through the simple act of walking along the most enduring structure that has conditioned the development of human history in the city did not only allow for further re-imagination based on our walk but was in and of itself an act of re-imagination. If water were considered heritage, and its narrative organised in frames where the longest of narratives was explored and memorialised, imaginations could run wildly beyond utilitarian narratives of engineering and ideological debates about the impact of commercialisation of water. This new mode of thinking water issues in urban space outside of the dichotomy of nature versus culture would cultivate a dialogue between various water worlds; those of activists, professionals, indigenous peoples, farmers, academics, etc, while simultaneously giving agency to water itself. It would then metaphorically be possible to walk in a web of life in space, and metonymically in a web of life in time.

Snapshots from the performances on festivals in Rotterdam.

## Literature


Assmann, Jan. "Cultural Memory: Script, Recollection, and Political Identity in Early Civilizations". *Historiography East & West* (1:2). (Leiden, 2003).

Braudel, Fernand. *The Mediterranean and the Mediterranean World in the Age of Philip II.* (University of California Press, 1996).

CI69 - Indigenous and Tribal Peoples Convention, 1989 (No. 169). ILO: *Convention concerning Indigenous and Tribal Peoples in Independent Countries.* http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:CI69 (Accessed 09.07.18).

Candiani, Vera S. *Dreaming of Dry Land: Environmental Transformation in Colonial Mexico City.* (Stanford, CA: Stanford University Press, 2014).

CEMDA. *El agua en México: lo que todas y todos debemos saber.* (Mexico City, 2006). https://www.cemda.org.mx/wp-content/uploads/2011/12/agua-mexico_001.pdf (accessed 10.07.18).

CEMDA. *Informe sobre la situación de los derechos de los pueblos indígenas en México.* (Mexico City November 8 2017). http://www.cemda.org.mx/wp-content/uploads/2011/12/Informe-sobre-los-derechos-de-los-pueblos-ind%C3%ADgenas-en-M%C3%A9xico_COMPLETO_FINAL-2PM.pdf (accessed 10.07.18).

Central Intelligence Agency. "North America: Mexico". *The World Factbook.* https://www.cia.gov/library/publications/the-world-factbook/geos/mx.html (accessed 10.07.18).

Coalición de Organizaciones Mexicanas por el Derecho al Agua. *Informe sobre violaciones a los Derechos Humanos al Agua Potable y al Saneamiento en México.* (2017). http://www.comda.org.mx/wp-content/uploads/2017/05/INFORMEDHAyS-para-paginas.pdf (accessed 23.04.18).

Cruz-Atienza, V. M; Tago, J; Sanabria-Gómez, J. D; Chaljub, E; Etienne, V. et al. "Long Duration of Ground Motion in the Paradigmatic Valley of Mexico". *Scientific Reports*. (Springer Nature, Dec 9, 2016). Available via: https://www.nature.com/articles/srep38807 (accessed 03.07.2018)

Eagleton, Terry. *Ideology: An Introduction.* (London: Verso Books, 1991).

Erlick, June (ed.). *Memory: In Search of History and Democracy.* (Harvard, fall 2013). https://revista.drclas.harvard.edu/book/memory-fall-2013 (accessed 04.07.2018).

Fondo para la Comunicación y la Educación Ambiental. "Legislación del Agua: Constitución Política". https://agua.org.mx/legislacion-del-agua/ (Accessed 09.07.18).

Harvey, David. "Marxism, Metaphors, and Ecological Politics". *Monthly Review: An Independent Socialist Magazine* (Volume 49, Number 11). (April 1998). https://monthlyreview.org/1998/03/01/marxism-metaphors-and-ecological-politics/ (accessed 09.07.18).

Heller, Leo. "Declaración de final de misión del Relator Especial sobre los derechos humanos al agua y al saneamiento". The Office of the United Nations High Commissioner for Human Rights, declaration given in Mexico City, 12 May 2017. http://www.ohchr.org/SP/NewsEvents/Pages/DisplayNews.aspx?NewsID=21608&LangID=S (accessed 03.07.2018).

Humboldt, Alexander von. *Ensayo Político sobre el Reino de Nueva España (libro III).* (Paris, 1822).

Márquez, Alma Gabriela et al. "VerificadoI9s". http://www.verificadoI9s.org/ (accessed 03.07.2018).

Medina, Carmen. "De Tenochtitlan a Uppsala – La historia del Mapa de México". *Actas del I Coloquio de Cultura Mexicano.* (University of Uppsala, 15-20 October 2007). pp. 1-9

Olsson, Gunnar. *Abysmal: A critique of cartographic reason.* (Chicago: The University of Chicago Press, 2007).

Pacheco-Vega, Raúl. "Agua embotellada en México: de la privatización del suministro a la mercantilización de los recursos hídricos". *Espiral: Estudios sobre Estado y Sociedad*, (Vol. XXII No. 63). (May/August, 2015). pp. 221-263

Political Constitution of the United Mexican States. Title I, chapter I, article 4.

Resolution A/RES/64/292. (United Nations General Assembly, July 2010); General Comment No. 15. The right to water. (UN Committee on Economic, Social and Cultural Rights, November 2002)

Ricoeur, Paul. *Memory, History and Forgetting.* (Chicago: The University of Chicago Press, 2004).

Tortajada, Cecilia. "Water Management in Mexico City Metropolitan Area". *Water Resources Development*, (Vol. 22:2). June 2006. pp. 353–376

United Nations. *The World's Cities 2016*. http://www.un.org/en/development/desa/population/publications/pdf/urbanization/the_worlds_cities_in_2016_data_booklet.pdf (accessed 10.07.18).

Urbanisten. *Towards a Water Sensitive Mexico City: Public Space as a Rain Management Strategy.* (Rotterdam, 29 June 2016).

Watts, Jonathan. *The Guardian.* "Mexico City's water crisis – from source to sewer". (November 12th 2015) https://www.theguardian.com/cities/2015/nov/12/mexico-city-water-crisis-source-sewer (accessed 23.04.18).

World Health Organization. *Guidelines for drinking-water quality, 4th edition.* (Geneva: WHO, 2011).

**“Nosotros cuidamos al agua.**
**Lo que les recomiendo, es la limpieza.”**

[“We take care of the water.
What I recommend you, is cleanliness.”]

Don Anastasio, suggestion to the authors, Santa Catarina del Monte, Mexico, June 2017