São Paulo, a City of Water

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By

Saide Kahtouni

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To my children *with love… before, they ran around the house, nowadays… they run through the streets of the city, with their bicycles*

Ana Luiza, Luiz Felipe and Maria Cecilia.;

To all of those who have somehow worked *to improve our urban environment, be they teachers, workers, housewives or simply… poets.*

The Waters

(To the Memory of Cecília Meireles, Brazilian poetess)

A river thrives as it runs.
In the course of a river,
Landscapes unfold
And memories entrench.
In the outlook of waters, stories
Have no sequence, for the river runs
In perpetual movement.
Birth, life and death
Birth, life and death
Birth, life and death?
Eternal, infinite circle
Though not free from violence
Land is taken from the riverbed
Portions of its body
Its crystal-clear purity.
Still, it runs its course,
Accommodating to new geographies
Laid out by Time and by Man.
It runs a flexible journey
To the current conditions,
Mindful of both the beginning and the end,
Even when its course runs amok.
And suddenly, behold!
Quiet turns to thunder,
Waters run berserk
And wreak havoc downstream.
The waters' space and place cannot be touched,
Apparently fragile,
Movement and might.
The sweet or bitter threads of life on Earth
Are reunited by the waters.

Poem by Saide Kahtouni

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And… for the divine opportunity I was given to express myself about this subject.

PREFACE

Vital and mortal, ignored where abundant, awaited in reverence when seasonal and brutally disputed if scarce, water has become a current concern, a most restricted privilege and widespread commodity.

Not only the recent demographic growth, but also – and indeed mostly – the uncertainty of its rates and incidences are a challenge in an unbridled urbanizing world.

In its momentum and depth, state-of-the-art modernization – associated with globalization or, as some would have it, worldwide economy – typically sprinkles industries and clusters services, top-down labour division, systematized technical equipment, sophisticated engineering that transform both the shell and the core of nature!

From this burning perspective, *Cidade das Águas* elects the upland, the edge of the countryside and a generously rain-drenched plateau where abundant springs and creeks run down towards drier regions.

A unique, late and subversive metropolization phenomenon on the planet, the Piratininga fields, near the Atlantic Forest, are considered in their geomorphology and rich hydrography.

São Paulo, this study case, reveals itself as complex in space and in time, primaeval and pioneering in territorial occupation, backward and overwhelming as a metropolis, ambiguous in the appropriation of its waters.

Fragments of its setting, of its cityscape, are visited by an eye that is both critical and conscious of the changes imparted by local inhabitants and entrepreneurs.

Saide Kahtouni chose the theme, developed it as her doctorate's thesis and now offers it to the broader range of stakeholders, supported by her professional experience pursued in facing this environment.

This study is a solidly technical and critical project, that developed the idea originally exhibited in her 1990s master's dissertation, making a trip

on the course of the media course of Tietê river, affected in its turn by the discretion of man all the way to the river mouth on the Paraná river.

On a par with criteria in selecting what to assess as a problem, with rigour in collecting data, in analysing and arguing as a scholarly professor, there is always sensitivity.

In her perception of, and taste for, the literary and a landscapist form, in her poetry and profession, there is an architect's eye.

Professor Murillo Marx
September 2004, for the first edition, in Portuguese.

INTRODUCTION

When a Russian astronaut looked down from the sky to the Earth and was thrilled by the blue color he saw, the awareness of this huge amount of water on our planet dawned on us. From the Moon, we clearly see the oceans. Ninety-seven per cent of all water on the globe is salt water and only three per cent is fresh, whereas two per cent lies underground and only one per cent sits on the surface. Hence the difficulties many populations face with their supply!

It's easy to make out an original link between this vital element and mankind, which always looks for it in our most elementary constructions. The need to regulate water use in order to preserve the various civilizations we know of has generated the laws of humanity that emerged with writing in largely arid regions.

Since the early civilizations, also referred to as "hydraulic civilizations", the water factor has been linked not only to survival but also to the socio-economic development of the populations, who were driven by the need for water control and therefore developed new natural resource management techniques, both in cases of scarcity and for control over water areas, as in the recent Netherlands example.

The true origin of the cities has, for more than 5,000 years, laid upon the control and management of agricultural surplus, enabled by technical advancements and irrigation; and then geometry emerged, to later rule over urban development plans, and developed upon agricultural division and the outline of the early irrigation channels.

Control of the rivers Nile, Tigris and Euphrates, in regions of a hostile climate and water scarcity, presents an ingenious plot that, in addition to its technical aspects, provides for the origin of the first gardens. In ancient Mesopotamia (meso + potamea = between two rivers), stepped terrace gardens were also developed alongside the architecture of huge ziggurats. Following channel layouts, the Persians also developed enclosures that are analogous to those of the Egyptian and Mesopotamian civilizations, whose themes are part and parcel of their traditional tapestry works.

The architecture in old temples of the classic era, and even earlier ones, provided for storage through mechanisms intent on diverting rainwater to sand-filled cisterns that would filter it for distribution to the cities.

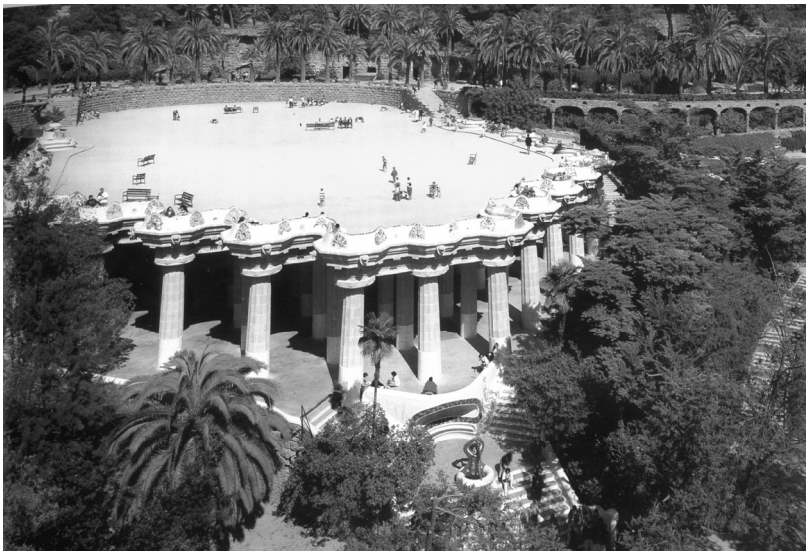

Figure 1.1 *The big suspended plaza in Barcelona's Guell Park.*
(Authorized by © Pere Vivas / Triangle Postals)

In his peculiar and ingenious Guell Park in Barcelona, Gaudí resumes that aspect from old temples by means of the correlations between the Doric colonnade supporting the sand plaza and drainage area, whose embedded ducts drive the water that filters through layers of minerals down to an underground cistern to supply for cleaning and gardening. The Park was built between 1900 and 1914 and the cistern was the first construction in the second phase of building the facilities, between 1906 and 1908. The symbolic nature of this Catalan architect's oeuvre is always recalled.

Magic and primitive religions have always been connected with the use of water in rituals, which was perhaps due to how clearly ancient peoples understood the connections between this element and the maintenance of life. As time went by, the Western civilization gradually forgot that – when, for instance, in the Middle Ages, discussing what the vital element would be, Paracelsus recalled sulphur and other substances but was far from water.

In today's cities, mankind tries to artificially recollect the elements it lost as its processes of anthropization coursed through time. Now polluted river waters are also symbolically replaced with strategically treated waters, distributed among springs, reservoirs, pools and lakes. It is important to recall that drinking water is not an inexhaustible resource and that our survival depends on it.

After centuries of carelessness, man is again trying to secure bonds with nature after developing a critical view of his own degrading actions, which time helps to unveil. In our case, one of the world's biggest metropolitan formations, I intended to afford the traditional view of São Paulo city's formation and consolidation with another outlook – based on studies of the appropriation of natural water territories that lost space to unbridled urban growth and progress, which generates a multitude of today's problems arising out of this Jesuit type of settlement.

This book seeks to demonstrate in its first chapter, "Waters of the City and Lands of the Waters", how handling watercourses with the technological means available at the time, immediately after the village was founded, created São Paulo's civilization and urbanity. Water was the basic input for the construction of this city, using water resource tapping and management technologies in the urbanization process.

Based on geographic and functional specificities of São Paulo's urbanization, some everyday instances are reported that show the local population connections with waters from the days when markets and ports thrived on the banks of rivers, in a city whose outpost role was always important because of its location on the launching pad towards the countryside, once the mountain range obstacle called Serra do Mar (Mountain Range of the Sea) was overcome.

In the second chapter, "Death of the Waters", I try to show how decisions on applying technology to water resources changed São Paulo's cityscape, commanded by urban functionality and economic interests that, in their turn, associated with land-related aspects to guide new projects and occupations, which included water territories.

Moving with time, situations will be shown where waters, as a functionally managed resource, allow for the construction of a city that became, in a matter of decades, a national metropolis.

In the third chapter, "The New Space of the Waters", I show that there are other technological possibilities for managing our waters to produce a

diverse cityscape for us. Technology forgoes reviews for the survival of a city. Studying the process of physically structuring our city, one can easily see how technological complexification and its subsequent fragmentation into sectors have also fragmented the city's ensemble of spaces and looks.

However, the disputable rationality is unveiled by a historical glance at the paradigm shift for technology after the 1960s. The technological options and their reflections on São Paulo's cityscape and general atmosphere enable insights into the functionalistic view of technological interventions on the physical environment.

Some thoughts will be shared, as well as technological transformation examples from the second half of the 20th century and the feasibility of alternative technologies within the new set of environmentalist views.

CHAPTER 1

WATERS OF THE CITY AND LANDS OF THE WATERS

1.1 Waters of the City

São Paulo city has been marked by waters since the city was founded – a cityscape inscribed with talwegs, whose central backbone was the course of the Tietê river.[1]

Coming to the city in the mid-1800s, Augusto Emílio Zaluar described São Paulo's urban centre cityscape, as seen from the little Penha church, as follows:

> *…At the far end of an infinite landscape, marked by high hills and smooth plains, steep church towers and white residential walls emerged from amid the green in the city of São Paulo, bent over the banks of the Tamanduateí river and the Anhangabaú stream, still enveloped in the fleeting early morning vapors of an awakening nature.* (Zaluar 1954)

Far from the coast in the early centuries of its existence, considering the prevailing speeds of those days, and founded, initially, as a Jesuit village, the city of São Paulo was soon to surpass the village of Santo André da Borda do Campo as the main township, as reported by Prado Jr. (1953), who referred to the foundation hill's position as strategically privileged against potential invaders. This author also recalls the transference requested by Manuel de Nóbrega to the captain-general and the king in the bygone 1500s, when Piratininga's river presented clear advantages over the initially elected plateau township: that of Santo André da Borda do Campo, whose population was finally transferred to the village of São Paulo de Piratininga, as ordered by General Governor Mem de Sá, in 1560.

---

[1] Previously known as Anhembi, this river is named Tietê on D'Anville's map, edited in 1748. After various interpretations of the name, we shall adopt João Mendes de Almeida's, which, according to Almeida Rocha, says: *ti* = water, and *etê* = big.

That request can be found in a document mentioned by the same scholar:

> *...It also seemed to me that Martin Afonso and His Royal Highness ought to be told that said Captaincy should not be devoid of any population, that freedom be given to the men so that those from the countryside get together near the Piratininga river, wherever they choose. And those from the coast get together where they can be stronger, because the reason for voidance is to have us live in the Santo André da Borda do Campo village, where there is nothing more than flour and they cannot tap fish from the river, for it is three leagues away, nor do they live in a convenient area to spawn, and if they were allowed to get to the river, they would have everything and quiet down*. (Archive S. I. Roman., Brazilians. 15, ff. 43 see publ. in São Paulo's Municipal Archives Journal, Year I, vol. II) (Prado Jr. 1953, 106–108) (emphasis added).

Coming from the coast, up to the highlands, colonizers would but follow the Tamanduateí (the Piratininga river), and would soon reach the Porto Geral and the Jesuits College, or head to the Tietê, to reach further inland.

At that time, allied Indians already grouped together in villages such as Nossa Senhora de Pinheiros and São Miguel.

Since the days of the first governor-general, Tomé de Souza, the regiment used was that of the king of Portugal, whose solution was to group catechized Indians in villages, and occasional villages were already known in the course of the Anhembi (Tietê) since 1560.

According to Bomtempi (1970), the first references about the São Miguel Paulista village, located in Ururaí – meaning "land of the fountains" – were written in 1585.

However, the main urban centre of that 1500s village, endowed with a Municipal Council (Chamber, as the Portuguese language would have it) and a pillory since the Santo André village was torn down, gathered around the city's historical hill, bent over the Tamanduateí and Anhangabaú rivers, for nearly three centuries.

The scene of the Piratininga (*pira* = fish + *tininga* = dry), comprising fish usually trapped by an ebbing Tamanduateí river, which flows into the Tietê, containing large and small valleys, yet untransformed flood plains and hills, has undoubtedly remained so for quite some time. From the very start, the city was located in headwater areas, land of many indigenous villages, where the Tupi language was largely used until the late 17th century (Holanda 1995). An archaic plateau township and, paradoxically, a

mooring for inner country contact with the Santos coastland, São Paulo settled on a valuable site. Aziz Ab'Saber thus described the city and its site in his studies:

> *...Squeezed between the somewhat rough terrain of the Atlantic Plateau and positioned in a relatively smooth area, in relation to the gigantic disruption of a descending Serra do Mar, the São Paulo region sprawls like a special compartment of Brazil's south-eastern highlands (...) it's singled out for possessing a small and relatively shallow plyocenic sedimentary fluviolacustrine basin, chiselled like smoothed-out tabular hills. The existence of this small plyocenic basin located on the back of the crystalline embankment was certainly what eventually created the easy and homogeneous rolling hills that provide the urban site for metropolitan São Paulo. In effect, on account of their extension and shape, the São Paulo basin hills accommodated the growth of a big city, in the very centre of vast, relatively uneven highlands.* (Ab'Saber 1956)

On these delicate rolling hills, depressions between hilltops and the grooves below hardly ever go beyond 40 or 60 metres. From a landscape perspective, the breadth of view between the sharpest slopes, in the distance, is very big, like when we look out today from a window in Barra Funda and behold the Jaraguá peak. In the past, hillsides and church towers were landmarks in a scene where constructions were homely and rare.

This is why the peoples in this settlement needed, and had a real opportunity, to overcome, very early on, the natural barriers of the city's site configurations, driven by the limited horizons they were presented with, in contrast to the economic and survival needs pushing them.

In the back-and-forth movement of troops and goods going everywhere, the main obstacle was the waters. While they provided the means for waterway transport, they often had to be overcome in order to allow for the village's internal and nearby flows that often resorted to roadways that also reached far off provinces.

Several bridges were soon to be built across the main rivers, in an attempt to overcome difficulties across a region abounding with the above-mentioned peculiarities.

Álvares de Azevedo said about metropolitan São Paulo:

> *…Sitting on a mountain and surrounded by grassy plains, the city has steep slopes and dishevelled streets…* (Prado Jr. 1953)

The main passageways out of the five terrestrial backbones were outlined as early as 1583: to the east (Rio de Janeiro and then Minas Gerais), looking for the Tamanduateí; to the south, looking for the Ipiranga towards the sea, towards the Ibirapuera and later towards Santo Amaro; to the west, looking for the Pinheiros; and to the north, towards Guaré, looking for the arid lands towards the future southern Minas Gerais.

Municipal archives looked into by Silva Bruno (1983, 223) revealed the registered need for bridges since 1563 that would help to more safely cross the village's rivers and creeks.

As early as 1608, reference was made to a certain "Guarepe" bridge, in the northern part of the village, over the Anhangabaú, in need of repair work, as the population would have it, and to a Tabatinguera bridge, over the Tamanduateí (Silva Bruno 1983, 223–224).

Since 1611, there has been news around the existence of a "big bridge" near the Mandaqui creek, a tributary of the Tietê. According to Porto (1992), cattle were not allowed to cross the bridge, because that could affect the structures, which, up until the early 18th century, were built of round timber.

Another famous bridge was that of the Pinheiros river, called "Jurubatuba", known since 1687, whose construction relied on contributions from the chambers of Parnaíba, Itu and Sorocaba.

In the 18th century, the Tamanduateí river already had four important bridges: the Carmo bridge, another one called the Middle bridge, the bridge of the Ferrão ranch, and the Fonseca bridge (at the end of a Tabatinguera street).

In 1786, a stone bridge was built upon an embankment of the Acu creek (from *Yacuba* = poisonous water), flowing into the Anhangabaú.

One hundred years later, in addition to the old mended or refurbished stone and timber bridges, the city had another two iron bridges sitting on stone pillars: the Santana bridge, over the Tietê river, and the Pinheiros river bridge on the road to Sorocaba, imported from London (Silva Bruno 1983, 621).

According to Silva Bruno (1983, 211), in the 1700s and early 1800s, the city's rivers and creeks continued to be adjacent to communicating

waterways, but they also created a host of problems, such as floods, which started to be addressed by municipal authorities in the 18th century.

For centuries, other less important settlements were started in the vicinity of that village, in connection with boat or draft animal transport, which often followed the mainstreams.

Caio Prado Jr. recalls the importance, too, of a flat open plain between the mountain woods and the plateau for the settlement of the village, which is likely to have taken him to the apparently contradictory choice of starting a settlement in a flood-ridden area. He described the site thus in his writings:

> *...The choice is explained by the existence of a huge natural clearing there in the forest, which covered the São Paulo territory: they are the Piratininga fields. The absence of trees on that site is explained by the original formation, compounded by tertiary clayish fluviolacustrine deposits that yield a poor soil. No significantly dense and sizeable type of vegetation ever developed there, and the natural forest covering the granitic and crystalline soils spreading in succession all the way from the Serra do Mar stops there and gives in to vast grasslands…* (Prado Jr. 1953)

As landscape, rivers and meadows would be early backbones to the village, settled on the hills, surrounded by plains and heaths, in an enclave between the Serra do Mar and potential discoveries and possessions of a countryside that is assisted by the Tietê river plus tributaries, a reference for both navigation and communications. So says Caio Prado Jr.'s report:

> *...Starting from São Paulo, the plateau village takes two different directions right away, both along the Tietê: upriver and downriver. Following those lines, colonists would settle and form the early villages and townships. Early on, what we find downriver includes: Nossa Senhora da Espectação do Ó (currently Freguesia do Ó) and Parnaíba, which was raised to the category of township in 1625. And following the Pinheiros, its tributary Jeribatiba (Great River), the Cotia and the tributary M'boi-Mirim, various townships and indigenous villages were founded or run by the Jesuits: Pinheiros, M'boi Mirim, Itapecerica, Ibirapuera (currently Santo Amaro)…* (Prado Jr. 1953, 108)

From the very early days of the primitive Jesuit village, good waters instructed the choices for colonizing settlements, a major aspect of the occupation at least during the first two centuries of the formation.

Those courses of water enabled rebel and obstinate *paulistas* (demonym for São Paulo residents) to make their way to Mato Grosso and Uruguay,

extending São Vicente captaincy limits to conflicting borders with the Spaniards, after 1640.

Nóbrega (1981) points at Tietê's role as a "waterway from the Plateau" because it opened up new paths and linked, in a veritable web, with other nearby rivers and creeks: Pinheiros, Cotia, Piracicaba and Paraíba.

Not all expeditions out of São Paulo started via waterways, as long before gold was discovered in Cuiabá, many inland-bound exploratory expeditions called *bandeiras* were recorded at the Pirapitingui port.

However controversial they may remain today, many narratives would have it that the first expedition running the entire Tietê waterway to reach Paraná was organized by José Sedeno, which included 60 soldiers and friendly Indians in 1612, shortly after the 1580 merger between the two Iberic crowns under the baton of Spain's succession of King Felipe.

The period 1580–1640 was successful for Brazil's territorial expansion, driven mostly by expeditions, *bandeiras* and raids, establishing Jesuit villages and implementing other colonial forms of territorial reconnoitering – once the Tordesillas Treaty had turned more flexible on account of the political context under an Iberic unification.

That information provides scholars with insights into what a "city state" the São Paulo village might have been as it sat on that magnificent plateau and grew to influence distant lands through the communication pathways of that day. It related to the São Vicente port, and later to the Santos, in the wake of the Athens-Piraeus and Rome-Ostia systems created before Christ on the Mediterranean coast.

In gigantic Brazil, the exception in small Portugal was the rule, since the huge territory of some donataries was gradually split into *sesmarias* for the cultivation of initially untapped land.[2] In a territory commanded by

[2] According to Cirne Lima, some would have it that the expression *sesmaria* comes from the word *sesma*, an alfoz's water division measurement, while others will have it that it means one-sixth of anything, or even that the word comes from the Latin *caesina*, which means to make an incision and cut. It is undoubtedly connected to agricultural use since its early origins and to partitioning crop land, in practice since the Roman Empire. In Portugal, *sesmarias* is a remote practice, dating back to the Order of Christ, where the king was the greater landlord.

gentiles, everything was considered by the colonists as reclaimed land,[3] since indigenous people hardly ever engaged in farming.

That custom, law or practice entailed certain rituals for urban land as well, favoured by the abundance of land in our country.

It was no different for the São Paulo village, raised to the status of city in 1711 and defined, in 1724, a *rossio*,[4] donated by Martim Afonso de Souza who issued a grant letter turning it into a *sesmaria*.

Heritage from ancient times also emerged through the Renaissance to the Portuguese who took, more than mere city patterns and shapes, to internalizing administrative standards and the functional model of their colonization, based on exchanges with maritime and river port cities and on rational divisions of agricultural land in colonization areas, in addition to the administrative model of Roman autarchies.

In his study on Brazilian Municipal Law, Meirelles (1977) states that, as a politico-administrative unit, the municipality was created by the Roman Republic and, based on the oeuvre of Alexandre Herculano, he concludes:

> *...Like the Roman municipality, the Portuguese Comune played political roles and issued their own laws, on a par with administrative and judicial attributions conferred upon them by the feudal lords.*

And, about Colonial Brazil:

> *...The Portuguese municipality was transplanted to Colonial Brazil with the same political, administrative and judicial organization and attributions it enjoyed in the Kingdom. Under the three Ordinations – Afonsine, Manueline and Philippine – that ruled Brazil until its independence (1822), our municipalities were uniformly constituted...*

---

[3] The praxis, in Portugal, was to snatch from owners any arable land that remained untouched out of neglect and give it to candidates willing to pay a fee, a venue or a duly arbitered amount in order to toil it and put the unclaimed land to use. That was widespread practice during the wars to recoup the Iberic territory from the Moors.

[4] According to Murillo Marx: "This area served different purposes, which could be summarized as all residents' use as pasture for their animals, felling for logging or firewood, and for farming, and it could also be used to expand the village by means of new land grants or by opening tracks and roads, building streets or squares…" (1991, 62).

For the demarcation of colonist land divisions, ancient Romans used, for instance, an important river or the sea as a line of reference for the cardini and decumani grid (Benevolo 1983).

Portugal's system of parcelling large land grants (*donatarias*) adopted in Brazil in the 16th century was also a way to redress Roman colonizing rules, enhanced by the historical experience of servile relations and vassal obligations of the most recent medieval Christian society, under the aegis of a king. The system of hereditary captaincies represented more than mere land division; it represented a regional division of power established upon a large territory yet to be explored, whose crown was geographically different.

As of 1522, when John III was nominated Grand Master of Portugal's Order of Christ, in a state where government and the Church were already merged, administrative control of land heritage became a crucial instrument for what was then termed "civilization of the new worlds".

In the new continent, the mission of propagating the Catholic Faith to the primitive peoples quickly associated with Antiquity's classic principles, with the clear influence of the Roman accoutrements under the Iberic domain of the new continents.

Coincidentally, the first modern urban legislation in the West was promulgated by Spain's Philip II in 1573, addressing city layout, shortly before unification of the Iberic crowns of Portugal and Spain.

The classic strategic tradition of associating the coastal mouth of a river with the possibility of penetrating new land, abounding in so many cases of colonial cities founded across the world, was then applied in reverse to the case of São Paulo, marked by the barrier of the Serra do Mar and by the existence of a long river running into the country rather than out to the sea.

With that structural inbound river whose headwaters were all on the mountain barrier, the São Vicente captaincy's functional system was clearly partitioned into main and complementary urban cores, some for inbound and outbound traffic and others for distribution and concentration purposes (hub cities).

Florence (1977), the second draftsman of Langsdorff's 1825 scientific expedition, narrates his impression of Cubatão – of the São Vicente river,

the site for a boat transfer to Santos, in the foothills of Serra do Mar, back in the days of the São Paulo sugar cycle:

> *…is the outpost between São Paulo and Santos. In the eight hours I spent there, I saw three to four troops of animals come in and another three to four go out. Each troop usually comprises 40 to 80 beasts of burden, guided by a trooper and divided in lots of eight animals that march under the direction of a herdsman (…) arriving from São Paulo, the troops are laden with raw sugar, bacon and sugar cane spirits, and they return with salt, Portuguese wines, bushels of merchandise, glass, hardware and whatnot.*

São Paulo was thus a gateway to the port leading to the entire countryside plateau (a major hub city), when the agricultural vocations of the territory were revealed through sugar cane and cotton, and finally granted the then province of São Paulo, during the second empire of the independent country, the significant role of "rural rearguard" (Reis Filho 1968) of the central nations, now on account of coffee plantations, when international economic relations were reaching higher levels of complexity.

Still about the earlier colonial days, Reis Filho comments on Portugal's urbanization policy:

> *…One may therefore say that, until the mid-17th century, Portugal enforced an urbanization policy in Brazil that consisted in indirectly encouraging the development of villages in territories belonging to donataries, at their own expense, where they ought to perform the tasks concerning founding cities in their own territory that would play the role of regional control centres. Leaving their spatial organization Union Power to the donataries and their representatives, guided solely by the Ordinations, Portugal sought to exercise more direct influence and effective control over the royal cities and nearly always to provide personnel and resources for their foundation and development. Those cities were therefore endowed with an urban framework that could not rarely be compared with the more important contemporary experiences in the Indies or with the colonial urbanization experiences of other nations…* (1968, 73)

After the mid-17th century, highly centralizing policies were implemented and the existing urban centres started to expand. That was the context in which the São Paulo village rose to the level of a city in the early 18th century (1711), and the city-hub-port relation became a crucial part of the new administrative structure.

Rising to the level of a city in the middle of the 18th century meant creating its own autonomous city council, which, as Hely Lopes Meirelles

reminds us, "did public works, established by-laws, excised taxes, nominated *almotacel* judges, tax collectors, public deposits, pawned-goods evaluators, *quadrilheiro* mayors, captain majors, sergeant majors, road chieftains, *vintena* judges and minor treasurers…", and more often than not they would judge minor claims and subpoenaed province governors to do public works of local interest with those councils, which, inspired in Rio de Janeiro, could actually dismiss them, as was the case with Salvador Correa de Sá e Benevides.

Local public interests would thus occupy official space in the city routine, though normalization of the physical aspects of the urban space would still be in the making, according to studies by Marx (1999, 41). That is where local public health and water supply concerns came in for the residents of São Paulo city.

In the middle of the 18th century, more precisely in 1744, there was news of the first public fountain being built in the city, by Franciscan friars in their cloister premises with remnants of their spring.

Marx (1984) clearly indicates in his thesis the importance of having good water for their cloister:

> *...requested by the friars themselves, moving to another site is important because it shows that carefully choosing a correct site to erect a new cloister could entail new considerations within their own custody. In this case, the water issue and climatic disadvantages are explicitly stated in the new charter issued three years after the first one, with the site properly determined.*

The old issue of public access to water is clearly exposed in the chamber minutes of September 20, 1780, dealing with a collective representation against Sergeant Major Manuel Caetano Zuniga, who considered himself the owner of a natural pool in the Anhangabaú region. Studied by Jorge (1999, 52–53), the document reads as follows:

> *...Dear Sir: We hereby present Your Honour with the violence imparted upon the people of the Anhangabaú bridge district on the way to Nossa Senhora da Luz with Sergeant Major Manuel Caetano Zuniga about his keeping the poor from washing clothes in a pool of water most of them use to wash their clothes and other uses for the distance and for not existing any other in that area in order to call for provisions by the distinguished Ombudsman of this city, Salvador Pereira da Silva, by which to divert the flow of that water into a yard in that district and for this power the sergeant major is not to block the pool of water nor to keep the people*

> *from washing as he did on the fifteenth day of this month, and on others when he found two white women, married and in good stand, addressed them with offensive words and from the black ones he cast their clothes in the woods and made like spanking them, and had his black men chase them the other day, and lower that pool of water so that there is none to wash nor to take home, on account of which we bring this matter to Your Honour to take the necessary action because said sergeant major is not a member of our jurisdiction.*
>
> *Your honour may be guarded by God for many years! São Paulo Chamber on September the ninth, in the year of one thousand seven hundred and eighty. The humblest subjects to Your Honour, Antonio de Freitas Branco, Manuel Jose Gomes, Mateus da Silva Bueno and Jose Gomes de Barros Sandim. Nothing else was contained in that letter and in this one I have faithfully registered and report from this city of São Paulo on September the twentieth, one thousand seven hundred and eighty. I, João da Silva Machado, scribbler of the chamber, wrote it and signed it.* (General Archives, XI, 319–320)

Conflicts were on the rise and a city could not be imagined whose population had no access to clean drinking water. So, governmental and non-governmental agencies got together, however slowly, to supply.

In the following century, the 19th, the city was marked by the presence of countless water fountains, which, according to Rolnik (1997), were "…nodes of a territory made of multiple points of connection, which had just drawn an invisible thread around the manors…"

Water fountains were in association with religious orders, brotherhoods of whites, mixed and blacks. Black territories were, in a way, marked across the city. Both free blacks and enslaved blacks were free to come and go between the water source and their masters' homes, while pipelines did not make their way to those households. What a nice excuse for a chat or a date!

A class of merchants, the *aguadeiros* (water dealers), supplied households that did not have slaves to fetch their water. Skirmishes were also common between slaves and water merchants in want of streams and fountains for their supply.

Even as the chief borough in the province, as early as 1830, two years after the implementation of the Legal Courses, the city of São Paulo still looked colonial. In that regard, students at Largo do São Francisco school of law

(many of whom were poets and writers, and some could be quite flippant) left many letters as a register of their impressions of the city.

Silva Bruno (1983, 600), in his second volume, lists a series of precious statements about the idle atmosphere and the scarce events in the provincial capital.

The lengthy existence of multiple municipal by-laws based on local control granted to the chambers, concerning the cities' growth mechanisms, shows that the heritage of colonial policies undoubtedly passed down to the administrative structure of a now independent Brazilian Empire that, nevertheless, maintained intense reminiscences of habits and customs concerning assets and by-laws on urban land and villages.

In 1824, in the wake of the March 25 Imperial Constitution, municipal chambers were implemented in every existing city and village. As Meirelles (1977) reminds us, practice was slightly different, though:

> *...provincial centralism did not trust local administrations and few were the acts of autonomy practised by the municipalities which, distant from the central power and unaided by the provincial government, waned in isolation while presidents of provinces flattered the Emperor, and the Emperor discredited the regional governments, in the centralizing yearning that rendered the Empire ever more unpopular…*

In 1854, according to Silva Bruno (1983), a provincial government's injunction established that the municipal chamber would indicate the sites where new streams and fountains were to be located, ordered by Afonso Milliet for the city of São Paulo.

This author also mentions Law School students visiting the Miguel Carlos water fountain in bathing suits at night.

Nevertheless, most of the population in the latter half of the 19th century were forced to make do with the still impure waters of the Tamanduateí. Public fountains did have limited operating hours, ruled by the municipality, and many *aguadeiros* filled their tanks with those river waters.

In Rio de Janeiro, in 1840, private individuals were granted the right to channel the water from fountains to their homes, on their own. The already precarious conditions in the city of São Paulo favoured prioritizing public supply for use by, or the embellishment of gardens, with new fountains, such as in the *Horto Botânico*.

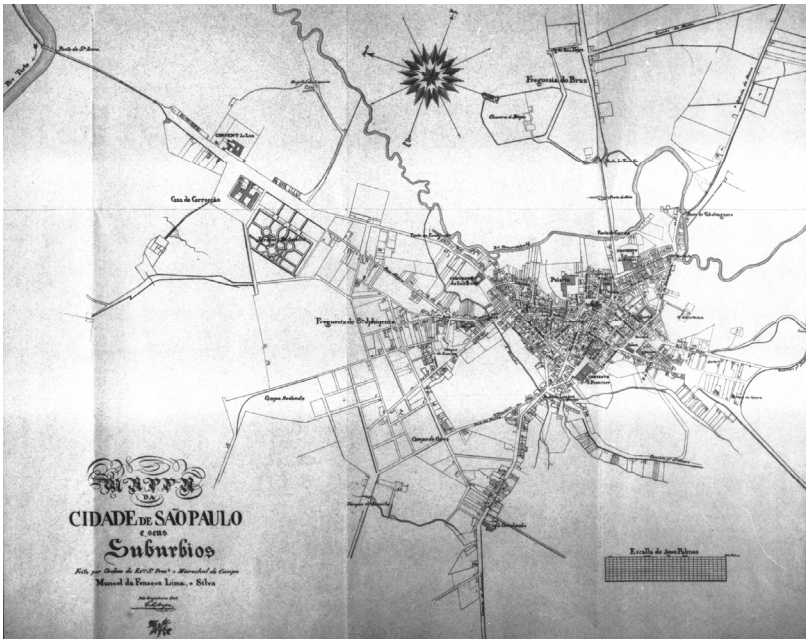

Figure 1.2 *The city of São Paulo in mid-19th century (1844–1847).*

As of 1800, with the increase and renovation of São Paulo's *Horto Botânico*, later known as the garden of Luz, the Reúno pool waters were used primarily as supply to the fountains of this important public garden, created anew under the romantic aesthetic standards of the European world.

Figure 1.3 *Jardim da Luz*, 1892. The city's former *Horto Botânico*.

According to Jorge (1999, 52–53), Reúno waters ran to the Piques fountain, across the Chá piedmont lands of Brigadier Francisco Xavier dos Santos, diverting to the vicinity of the Santa Ifigênia church, alongside the former Triste street. After running past a few properties, it would lunge into the garden, by then the Botanic Gardens. Overflowing, at about what is now the São Caetano street, the water would run down to the Tamanduateí: "…However, the stream would run past Santa Ifigênia and be unduly cut by some local residents, including Brigadier Moraes Leme himself…" The same author points at the city chamber's continuous interventions in those acts, in a radically opposing approach to that of Rio de Janeiro's government.

Only in 1868 did the provincial government of Baron of Itaúna order the ditches along that course of water to be replaced, some with brickwork and others with a pipe system deemed adequate at the time. Those pipes were later discovered to be made of bitumen-coated cardboard rather than iron or lead.

Much later on, during the Luz park's renovation works of 1996, a team from São Paulo Municipality's Historical Heritage Department (DPH in the Portuguese language abbreviation) was excavating the foundations of