

This story begins 15 years ago. I was staying with a Neapolitan couple who I had met shortly before. They showed me round their city, which to an outsider looked chaotic and cluttered. One of their recommendations was the then recently opened Napoli Sotterranea, Subterranean Naples. I found the door closed the first two times, but it was third time lucky. Two other interested people, a guide and I descended the endless stairs, down to 40 metres below ground.

With the system of the system

With Years passed. Then, in the Summer of 2005, I met Carlo from Naples. I knew I needed a holiday and the Vesuvius would build my strength, or so I was told. One of the first things I did in Naples was visit the Napoli Sotterranea. By then, the whole operation had been professionalized. There were more visitors, an Englishspeaking guide and fixed opening times. If possible, it had become more fascinating than ten years earlier. A larger area had been made accessible and there was now water in one of the cisternes, so it was easier to imagine how the system worked. The contrast between the dark, deathly calm underground city and the lively, noisy city above was immense. A framed note in the corridor, signed by writer Isabel Allende, put this into poignant words: 'The underworld – I have the feeling that I have been in the sombre place of death, winter and mystery, a dark place where Demeter searches for Persephone, the other face of Naples. On the surface life, noise, crowds and sun. Underground: a lunar womb. It has been a moving experience to walk in these corridors of purgatory.'

Most Neapolitans I spoke to knew nothing of this underground city. Never mind foreigners. I just couldn't believe it. Why isn't this exceptional phenomenon more well known and why isn't it being put to better use?

WWW Once at home, I decided to write an article. I found contacts and during my next visits to Naples we arranged to meet. They told me about the history and the system's operation and they took me below ground.

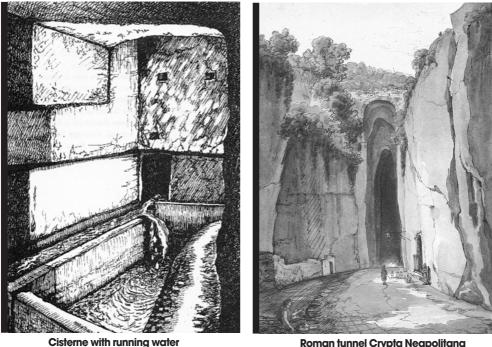
WWW Origins of Subterranean Naples

The Greeks created 'Neapolis' (the new city) 2500 years ago, on the site of the present old city centre. They constructed an underground aqueduct (water mains, both below and above ground), called Bolla, that brought the water from the Vesuvius via supply ducts directly underneath the houses and squares to cisternes. Via a well it could then be hauled above ground. The stone released during the excavation was used as building material. They constructed the system at approx. 40 metres below sea level. The yellow tuff stone below the city – created by Vesuvius erupting ca. 15,000 years earlier – is easy to manipulate and strong nevertheless. There were larger quarries just outside the city to build the city walls.

The Romans – during the age of Augustus (63 BC – 14 AD) – expanded the city and enlarged the Greek water system. They realized an impressive aqueduct (partly above, partly below ground) that brought water into the city from 80km away from Naples. This canal ran via the city all the way to the coast, north of the city. The Romans also constructed tunnels. The tunnel between Naples and the more important Roman cities of Baia and Cumae to the northwest, where the armada also lay, is 700 metres long. That tunnel is now called the Crypta Neapolitana.

In subsequent centuries the first Christians constructed catacombs. Subterranean Naples witnesses explosive growth in the 16th and 17th centuries, due to a ban on bringing building materials into the city. This measure was meant to curtail the building craze; in the 16th century Naples was the most densely populated city in the world (212,000 inhabitants in 1547). But the unintended consequence was that tuff stone was excavated surreptitiously below the building site itself. When in the 18th century the constrictions on building height were lifted, seven-floor houses were no longer an exception. In effect, the negative of the city above was created below ground.

In the early 17th century, the old water supply beneath the city had to be drastically improved and so the Acquedotto Carmignano was brought into use below the new urban extensions. The existing system was enlarged and updated by the Bourbon kings in the following centuries, based on the same technique. Until 1884, when a serious cholera epidemic broke out in Naples, because the sewer, located far above, had broken and spilled into the aqueduct. Subsequently, the aqueduct was closed down and replaced with a mo-



Roman tunnel Crypta Neapolitana

dern water supply with pipes.

Shortly after, engineer Guglielmo Melisurgo, by order of the city council, systematically examined the spaces below the city, because there was little precise information at hand. Up until then only the 'pozzari' (the water cleaners/supervisors) knew the underground network, which was only accessible via the deep water wells. In 1889, Melisurgo published his findings. He had counted more than 5000 cisternes and grottos and 2000 wells. He writes that below ground one can traverse the entire city.

By the end of the Thirties, the city council began to fit out part of the underground spaces as bomb shelters. To this end, the wells were equipped with stairs suited to fleeing masses. Narrow corridors were widened and spaces interconnected. During the Second World War the bomb shelters were used intensively; hundreds of thousands of Neapolitans sought protection there, sometimes for months, against the 28,000 bombs that fell on the most heavily bombarded city in Italy.

After the war the Neapolitans wanted to erase the painful memory of war time as quickly as possible. Rubble from the ruins was thrown into the wells and entrances were bricked up. The memory of underground Naples clouded over. Apart from deep holes appearing here and there, through instability after heavy rainfall for example.

In June 1979 smoke rose from the numerous old wells in Naples' centre. The underground city was in flames. Wood scraps below a timber yard had caught fire. The fire spread quickly beneath the old Quartieri Spagnoli. Nobody knew where exactly the fire raged and the Neapolitans had forgotten how to go down there. When the fire brigade and local inhabitants had finally extinguished the fire, they rediscovered subterranean Naples. Volunteers began to clear the rubble. Up until now one million m2 has been made accessible, which is probably only a third of the entire space.

It is clear that the underground city has taken care of the city above through the centuries: it was thus provided with clear drinking water and building materials. The underground city offered the inhabitants safety during bombardments and shelter to refugees.

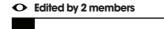


Well, with winding staircase to bomb shelter

Weight Present-day Use

And what is Subterranean Naples' role within the city now? Some of the extensive tuff stone quarries surrounding the old city mainly function as garage space. These spaces are not as deep below street level as the aqueducts; sometimes they were dug into the mountain almost horizontally. This is very useful to a city like Naples, being choked with cars as it is. You hand over your car and key, and the garage supervisor spends the entire day rearranging cars as if his domain were a Rubik's cube. Their past is sometimes surprising. What is now called the Gran Garage, was used by the Romans to worship the god Mithras and was then utilized for a long period as a rope-yard.

WWW Others are used as storage space by all manner of shops, wine merchants, confiscated cars and of course weapons and other business involving the Camorra. The areas beneath banks are monitored especially, just like those of buildings where important meetings are held.





The enormous stone quarry below the Palazzo Cellamare has been in use since 1947 as the cinema and theatre Metropolitan, seating 2000 people. In 2003 the complex was renovated and extended and now houses 7 auditoriums, with another three layers of private garages below that. The architect of the renovation used existing spaces as much as possible.

***** And besides that, the deep-down and spectacular aqueducts are used for tours – such as those of Napoli Sotterranea, as exhibition space or sometimes to hold concerts.



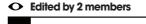
Gran Garage, formerly Mithras temple, and subsequently rope-yard

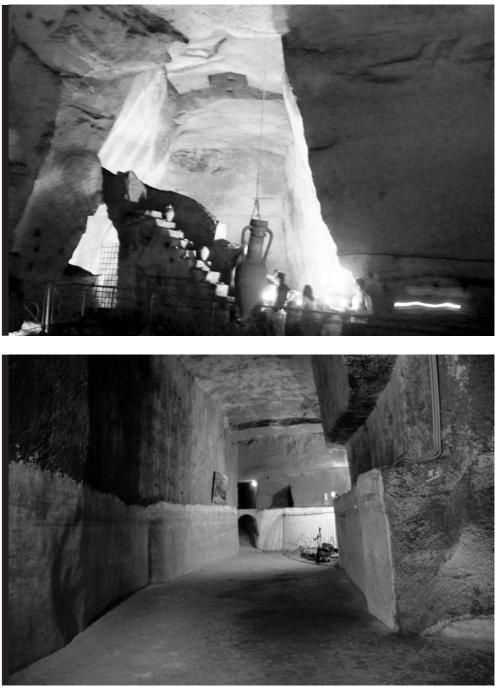
These are all private initiatives started by volunteers. But the greater part of the spaces are not in use or have not even been 'discovered'. Interesting within this context is an issue of the Italian architecture magazine DOMUS from 1987, devoted mostly to Naples. Based on that, international architects put in proposals for new uses during the 'Laboratorio Internazionale Napoli Sotterranea'. Carlo Aymonino proposes to house a museum there with archaeological finds that cannot be exhibited in the full-to-bursting Museo Nazionale. The Spaniard Bohigas proposes to have tourists arrive in the city by boat through underground spaces, which house a 'museum' of our throw-away society. Botta wants to transform the stone quarries in the north of the city into a large urban park, which is (in part) being implemented, and Solà Morales is making a glass housing block that will merge with the enormous grotto below.

Marco Zanuso's plan to cultivate plants in underground Naples – utilizing the constant temperature and humidity – has been realized in Napoli Sotterranea.

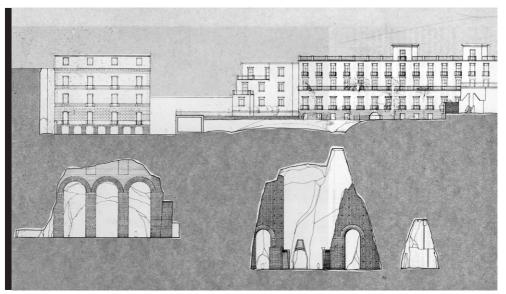
WWW Neapolitans and Naples underground.

The brothers Quaranta decided, as a result of the aforementioned fire below their quarter, to clear part of it and organize tours there. Many bomb shelters were built there that they were forced to use as boys. The long wait and the stuffiness have been etched into their memory. To make these bomb shelters, the water system had to be drastically revised. Access corridors were divided up and widened and wells were bricked up against bomb hits. During the tour the guide asks everyone to be quiet and he turns off his lamp. Icy silence and darkness follow. It is a frankly terrifying experience. He explains that there are many connections between above and below – namely, the water wells - but that they are difficult to locate. A vertical series of holes were cut out in the wells, through which the pozzaro, almost like a monkey, could go up and down. He tells about how the pozzari, who kept the water clean below ground, could enter houses unnoticed via the water wells. How they seduced the lady of the house or, if they weren't paid on time, stole either money or

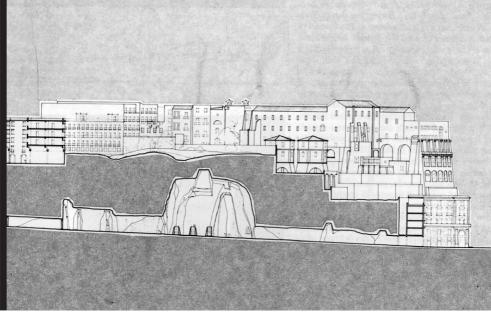




Napoli Sotterranea



Cross-section over Mithras temple (picture: Francesco Venezia and Paolo Di Caterina)¹



Borbonico tunnel (picture: Francesco Venezia and Paolo Di Caterina)¹

valuables. Nowadays, people still point downward whenever something inexplicable happens indoors.

Clemente Esposito M Sc, is a spirited character; the Godfather of subterranean Naples. He is a chemical engineer and worked for the council for 50 years to solve problems underground. 40 metres down, he has been busy for years to realize his Museo del Sottosuolo. He has exhibited finds in a huge tuff stone quarry, replicated a Greek burial vault and a space to worship Priapus (and his attribute), the fertility god. The museum is open by appointment. At home, Esposito has maps he made underground; he invites us in. His street is not even four metres wide, the houses numbering six or seven floors. The facades are nothing special, as is often the case in Naples. But the buildings contains surprises on the inside that you fail to expect on the outside: a gigantic room with spectacular painted ceilings, an original 16th-century water well, an exceptional view of the Vesuvius and a roof terrace with trees and plants. The maps are fascinating to behold: rhythm and direction of the subterranean spaces have nothing whatsoever to do with the urban plan above.

According to Esposito the state owns the underground areas in all Italy. The city cannot, therefore, sell or rent out spaces. Although it is customary that people can use the ground below their own houses, as wine cellars for example. But this legal obscurity is now causing problems, for where does A's territory end and B's begin? Esposito relates from his years of experience how unique it is to enter a new space, that nobody has set foot in before, for the first time. We people are actually frightened, he says, but to progress it is vital to overcome this fear. As Odysseus once wanted to cross the then known boundary of the world to widen his



Map of subterranean Naples by Clemente Esposito

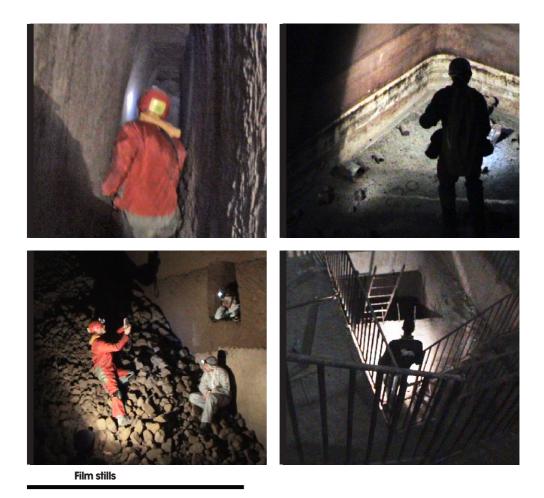


knowledge. Neapolitans have always respected their underground city, he tells me, due to their relationship with rituals and mythology and the association with the realm of darkness, with death.

With urban speleologists Fulvio Salvi and Luca Cuttitta relate how their trips below ground are an adventurous way to explore their own boundaries – physically and mentally – because you are engaging in a confrontation with yourself. In a world in which everything is photographed, mapped out and available through the internet, they are attracted to these fascinating kinds of unexplored, underground spaces with their darkness and silence. They take me with them on an uncharted route underground. I walk and crawl in their footsteps and record it on film. After an hour or so we are outside again and my legs are shaking. Only now do I realize the tension involved in such a trip. They want to open an underground visiting centre, but have been trying to get the necessary signatures for a long time.

XXXX A Longer Stay

To have more time to spend on research, I decide to rent an apartment for a few weeks in a working-class district in the centre. Now I have plenty of time to go in search of the Piscina Mirabilis, the immense cisterne for the emperor's fleet, into which the Roman water system discharges itself. The reservoir lies on a neck of land west of Naples. The neighbour is willing to open the rusty gate – besides her there is no-one. The impressive space at once evokes Piranesi's prints. There are arches, columns, stairs, old stones, cavities in the roof through which the light falls in and water trickles down. We are standing in one of the largest reservoirs in the world that has remained intact for centuries. All alone, how is that possible?



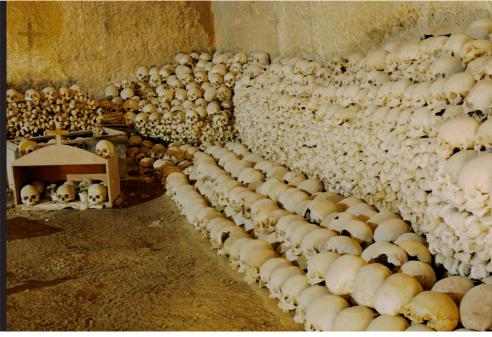
WWW Having returned, a huge thunderstorm erupts. Rain pelts down on the corrugated iron surrounding the apartment, the wind howls around it. The electricity fails and it seems as if the earth is shaking. I look out of the window at the Vesuvius. The light at the feet of the Madonna statue is the only one to bravely keep burning. I begin to feel uncomfortable about the natural calamity hanging over me, the clatter and trembling around me and the Vesuvius nearby. Suddenly, I understand quite well how scared people can be of the forces of nature and wish to dispel this evil. ***** A nice place to see this is at the Cimetero delle Fontanelle. The grotto is often closed, but proves to be open to visitors just now. My first book about Subterranean Naples concerned this grotto. The book concerned the intimate entanglement of life and death for the Neapolitans, in search of hope and solace.

WWW For centuries, tens of thousands of victims of epidemics, earthquakes and war, and the remains of cleared cemeteries were left in this old tuff stone quarry. Resulting in an enormous space filled with millions of skeletons. A priest of the Materdei church, with the aid of many volunteers, began to sort out and tidy them in the ossuary. He put skulls with skulls, shins with shins, etc. The result is rows of skulls on wide walls of various long bones. An ever growing number of believers flocked to the grottos. They adopted the deceased, and took care of them. They would clean and polish a skull and lay it in a glass reliquary box with flowers and other decorations and notes. In exchange they would ask for favours. These rituals have long since been banned by the Roman Catholic church. Recently, the grotto was tidied, cleaned and refurbished, but the bizarre display remained. Without realizing, visitors walk on a metres-thick layer of bones, the guide says.

XXXX A newspaper is advertising an esoteric tour, at night of course. The group is made up of mainly elderly women. Breathlessly, they listen to the age-old, often bizarre, stories about love and hatred, treachery and revenge. The group walks past the church of the Madonna ad Arco, which was built to perform rituals for the deceased. The candle-lit, large underground spaces are visible from the outside. Some of the skeletons have been removed by the RC church, but what remains still receives floral tributes. There are two little columns



Piscina Mirabilis, Bacoli



Cimetero delle Fontanelle



outside the church with copper skulls on them. Those who lay their hands on them, can feel them glow, guide Gabriela says. And they do.

With the time to return to the Greek aqueduct that it was all about. Where did the water actually come from? The source should still be traceable to the little town of Volla, just outside Napels, inside a house. We do indeed find that house, but the corresponding grounds prove to be hermetically closed up with a tall fence of iron plates. A little further down, below the street, an incredibly filthy watercourse churns out from the grounds. Further still, from a rise, we look down and over the fence: those are sewage suction cars. Apparently it is being emptied into the Greek source. We can now see all the camera's on the fence. Camorra, Carlo says.

Disappointed about this entire business, the disinterest and the Neapolitans' fatalistic attitude, I leave the research be. So much for the article. That's the way it had to be, as the Neapolitans would say themselves, it is fate, il destino.

Il Destino

Two years later, fate reconsiders, as AetA requests an article for Forum about Subterranean Naples, the city's invisible underbelly. That cannot be a coincidence, so I take the plane to Naples.

XXXXX A lot has happened below ground, apparently. The Roman theatre has opened temporarily, where archaeologists are at work. Nothing is visible from the street: on top of the theatre, a street has been laid out and houses built. Part of the stand and the semicircle in front of the stage have been uncovered. Some of the houses have been demolished for this. There is a schematic on the wall combining an even further excavated theatre with the surrounding housing. All the tours are fully booked.

****** And the Tunnel Borbonico has been opened, a private initiative worked on for years. The tunnel is the secret escape route of the Bourbon kings, designed in 1853 by architect Errico Alvino, from the palace to the sea where the fleet lay. The tour exhibits a surprising mixture of masterly engineering water reservoirs, mysticism, war memorials and antique cars. The tunnel sometimes runs like a bridge over antique water reservoirs. In one of these, a relief has been carved into the wall and because of this, it is now believed the freemasons held meetings here. After the war and well into the '70s of the previous century, the police stored large numbers of confiscated cars in the grotto, among which some extraordinary ones, now covered in dust. This is all presented sympathetically, treating casual finds of various ages with respect. At the end the tunnel opens out into an enormous space: the Grotta Carafa, which now houses an ultramodern parking garage of 7 layers. Between the tunnel and the garage itself an underground square has been created: once again, a fusion of the old and the new. The only downside to this more professional approach is the ban on photography.

***** This time, I leave Naples with a positive mindset. Subterranean Naples appears on the rise and that means work for youths who speak foreign languages. More and more streets have been cleared of cars, resulting in leisurely strolling Neapolitan families. The garbage that always lay in the street has been shipped off to – Dutch – incinerators. A new mayor appears to have been elected. Who is proving to be a breath of fresh air that will hopefully reach below ground. 1— Francesco Venezia and Paolo Di Caterina , Domus 1987, no 681