CHAPTER 3

Prisons Between Territory and Space: A Comparative Analysis Between Prison Architecture in Italy and Norway

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How can the software Google Earth Pro contribute to our knowledge of prison architecture, territory and space? This chapter presents a morphological and dimensional analysis of seven Italian and six Norwegian prisons, which aims to relate these physical data to other kinds of information collected by official sources and prisons, such as, the construction period, the urban pattern where they are placed, and the kind and number of people housed. The aim of the article is to show the methodology applied and to discuss the results in terms of differences and similarities among the Italian and Norwegian prisons, being aware that the placement in the terrain, the size of the prisons, and the composition of the different parts of the prison complex (fences, guard towers, buildings, open spaces and more) are an expression of culture and ideology. They reflect penitentiary laws and regulation, and the culture of imprisonment in each country.

Comparison Using the Google Earth Pro Method

In order to analyze the 'materiality aspects' of the prison complex we followed the methodology already experimented with in a study of hospital buildings in Italy (Giofrè, 2015), using the software *Google Earth Pro*. In this article we have enlarged it in order to understand the relationships between prisons and cities. We elaborated some ideograms to show the relationship between the terrain and the center of the city, and how prisons can be reached. We delimited the area of the consolidated city, the downtown, using an official map, and we calculated the linear distances that separate the prisons from the city centers, taking as a point of reference the consolidated historical areas of the cities. We highlighted the main road axes connecting these parts, and the main natural elements that designate the areas, such as seas and rivers.

To analyze the prison complexes, we applied the computer software Google Earth Pro. We made satellite images of each prison selected, at a height of about 1.5 km above the ground, and carried out a survey of all the spaces within in the prison complex.

We first defined the elements necessary to highlight, in order to better understand the borders in terms of access and control systems, external and internal barriers, and the use of the spaces, built and unbuilt and, where possible to read, their use.

We analyzed the access and control systems, pointing out:

- Entrances, both pedestrian and vehicular.
- Guard towers.
- Barriers separating the prisons from the cities:
    - Light metal fences (height up to 2 meters, or consisting of removable meshes).
    - Heavy metal fences (over 2 meters, permanent).
    - Walls.

We identified seven different functional sites:

- Buildings.
- Circulation areas.
- Open spaces bordered by a chain-link fence (terraces and open spaces adjacent to the prison cells).

- Outdoor parking areas, including the ones devoted to visitors and to workers.
- Green spaces (including, in some cases, cultivated areas).
- Outdoor sports areas, for example, football and volleyball courts.
- New construction areas.

Thanks to the advanced measurement tools of Google Earth Pro, we were able to read the typology of the accesses, control systems and barriers, and the functional site in each area. We obtained the dimensional data for all these surfaces, and we calculated the total amount of built and unbuilt spaces, and the relationships among these. We must point out a critical aspect of this study: the detention facilities were investigated only through an indirect analysis, without conducting on-site surveys.

We identified seven Italian and six Norwegian case studies, basing the selection mainly on the size of the prison complexes and on the detention purpose.

Among the Italian case studies, we selected four "case circondariali" and three "case di reclusione" (see chapter 6), located in different parts of Italy, from north to south and in the islands. The "case circondariali" house people who are awaiting sentencing, or who are sentenced to less than five years (or with a residual sentence of less than five years). The "case di reclusione" are devoted to the execution of the sentence. The first group includes big complexes, which house more than 1,000 people (from 1,150 up to 1,928). The second group includes three medium-size structures (140, 347 and 552 people). The National Penitentiary Administration Department - Office for the Development and Management of Automated Information Systems - Statistics Section provided the data gathered to manage this selection. This information was last updated on 31 May 2016.

The Italian prisons chosen for analysis among 'case circondariali' are:

1. Poggioreale "Giuseppe Salvia" in the city of Naples, Region of Campania: an ancient one that accommodates 1,928 people.
2. Rebibbia in the city of Rome, Region of Lazio, a vast complex divided into four parts, housing 325 people in the female district jail ("Germana Stefanini"), 1,384 people in the "Raffaele Cinotti" district jail, 81 people in the "Rebibbia terza casa" district jail and 331 people in the "Rebibbia" prison.
3. Lorusso e Cutugno in the city of Turin, Region of Piedmont. The complex, built around the year 1980 and further expanded in the years 1990–2000, has a real capacity of 1,162 people.

4. Pagliarelli, in the city of Palermo, Region of Sicily, also built around 1980, it houses 1,150 people.

Among the 'case di reclusione', we have selected:

5. Parma. Region of Emilia Romagna, a quite recent complex (built starting in 1990), that accommodates 552 people.
6. Ucciardone - Palermo. Region of Sicily, a complex built in several phases, starting from the Bourbon Age (mid 18th century), housing 347 people.
7. Volterra - Pisa. Region of Tuscany, is the oldest prison analyzed (since it was built back in 1474) and has a real capacity of 140 people.

Among the Norwegian prisons, the selection was done according to prison size. We chose two big prisons of over 100 prisoners, two middle size prisons with from 50–100 prisoners, and two small prisons with less than 50 prisoners.

Big prisons in Norway are the ones with over 100 prisoners, such as Halden and Oslo Prison.

8. Halden is one of the biggest prisons in Norway. It is a high security complex with a regulatory capacity of 259.[1] The prison takes people in custody, and with different categories of sentences. The prison was opened in 2010.
9. Oslo Prison is also a high security closed prison. The capacity here has gone down from 392 prisoners to 220. The prison was built in 1851.

Middle-sized prisons in Norway house from 50 to 100 prisoners.

10. Telemark Prison, Skien division is such a prison. This is a closed prison for 82 prisoners, housing both women and men. Every prisoner starts out in the incoming unit, division "A". The prison also has a drug treatment division, and was built in 1993.

1 The prison has during the last few years built some doublets; meaning that two prisoners share the same room. This means that the prison has a total capacity of 259 prisoners.

We considered small prisons that accommodate up to 50 prisoners.

11. The Youth Unit at Bjørgvin prison in Bergen is one of these. This is one of the two closed prisons in Norway that takes 4 children and youths between 15–18 years. The prison was ready in 2014.
12. Ålesund Prison is a closed prison with rooms for 27 prisoners. It was built in 1864.
13. Eidsvoll is a recently re-organized prison, housing 4 children and youths between 15–18 years. The prison was opened in 2016.

In the following profiles, we illustrate the analysis of each case study, elaborated using the above mentioned methodology, with extra information gathered for the Italian prisons from the Informatics Service of the Ministry of Justice. In Norway, the information was given directly by the prison heads or other personnel in each prison.

We designed a profile for each case study, organized in a homogeneous way; these profiles allow us to discuss a final comparison. More precisely the 13 profiles present the following data:

- The first image, on the left, indicates the location of the prison in the country.
- The following data present the year of construction, the regulatory and the real capacity, the distance from the city center, number of women and of foreign detainees, and a list of the main common indoor spaces and services available.
- The ideogram, on the right, shows the relationship between the prison and the terrain. It highlights the boundaries of the city center area, the localization of the prison, main street axes, main natural elements, and the distance between the prison and the city center area.
- A brief description illustrates the main features of the prison and the building typology.
- In the satellite image, we highlighted the above mentioned typologies of boundaries (accesses and control systems) and of the seven functional sites, we elaborated charts that show their percentages and the ratio of built to unbuilt spaces.

Construction started: 1905
Total surface: 76,669 m²
Regulatory Capacity: 1,640
Real capacity: 1,928
Distance (city center): 1.2 Km
Women: 0
Foreigners: 285

Gyms: 0
Classrooms: 0
Theaters: 0
Libraries: 1
Houses of worship: 2
Laboratories: 5
Production Workshops: 3
Canteens: 2

Prison
City center
Main streets
Sea and rivers
Distance between the Prison and the city Center

The district jail poggioreale was built according to 19th century architectural criteria, and has been modified over theyears. Its Typology can be represented by the courtyard building. Also due to its position in the consolidated urban pattern, the complex Shows a high ratio of built spaces toopen spaces.

Access and control system

Light metal fences
Heavy metal fences
Walls
Guard towers
Entrances

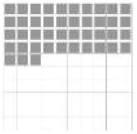
Functional sites

Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages

43% buildings
37% circulation areas
10% bordered open spaces
5% outdoor parking areas
4% green spaces
1% outdoor sports areas

Built/unbuilt spaces



Profile n. 1 Poggioreale "Giuseppe Salvia" - Naples. Region of Campania, IT (Photo: Google Maps)

Construction started: 1946
Total surface: 578,865 m²
Total Real Capacity: 2,121
Distance (city center): 6 Km

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

"GERMANA STEFANINI" Female district jail

Regulatory Capacity : 260
Real Capacity : 325
Women: 325
Foreigners: 178

Gyms: 2
Classrooms: 6
Theaters: 1
Libraries: 1
Houses of worship: 1
Laboratories: 2
Production
Workshops: 0
Canteens: 0

A) "RAFFAELE CINOTTI" N.C.1 district jail

Regulatory Capacity: 1203
Real Capacity: 1384
Women: 0
Foreigners: 493

Gyms: 4
Classrooms: 21
Theaters: 1
Libraries: 7
Houses of worship: 1
Laboratories: 0
Production
Workshops: 1
Canteens: 0

B) "REBIBBIA TERZA CASA" district jail

Regulatory Capacity: 172
Real Capacity: 81
Women: 0
Foreigners: 11

Gyms: 1
Classrooms: 3
Theaters: 1
Libraries: 1
Houses of worship: 1
Laboratories: 5
Production
Workshops: 0
Canteens: 1

C) "REBIBBIA" prison

Regulatory Capacity: 447
Real Capacity: 331
Women: 0
Foreigners: 70

Gyms: 2
Classrooms: 12
Theaters: 0
Libraries:2
Houses of worship: 3
Workshops: 3
Laboratories: 1
Production
Canteens: 0

Profile n. 2 Rebibbia - Rome. Region of Lazio, IT

The complex encompasses four different penal institutions, completely autonomous, three male and one female. In each institution, there are offices, services for employees and different sections for the custody of detainees.
The typology of the whole complex is the separation of buildings, but some institutions, as, for example, the "Raffeale Cinotti" N.C.1 (part B), embody the telegraph pole system, where, from the center, it is possible to see the prison sections.
In the female institute, there is a specific building for the imprisonment of detainees with young children, who are permitted to reside with their mothers until they reach three years of age.

The "Rebibbia" prison (part D) is composed of three pavilions, each vertically divided into two sections. Of these, four are designed to house common criminals with medium security, and one houses detainees allowed to work outside.
In order to measure the percentage and the distribution of the functional areas, we considered the whole prison as a unique system.

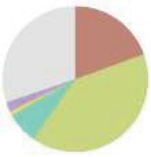
Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

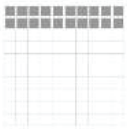
Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages



20% Buildings
30% Circulation areas
1% Bordered open spaces
2% Outdoor parking areas
40% Green spaces
7% Outdoor sports areas

Builtz/Unbuilt spaces



Profile n. 2 (Continued...) Rebibbia - Rome. Region of Lazio, IT (Photo: Google Maps)

Construction started: around 1980
Total surface: 233,035 m²
Regulatory Capacity: 1,132
Real Capacity: 1,162
Distance (city center): 2.1 Km
Women: 121
Foreigners: 596

Gyms: 0
Classrooms: 0
Theaters: 1
Libraries: 2
Houses of worship: 4
Laboratories: 5
Production Workshops: 2
Canteens: 0

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

The complex initially consisted of three large detention blocks and two smaller blocks (female section and new comers), designed according to the typology of the separation of buildings. In the years 1990-2000, the detention facility was expanded by the construction of a pavilion housing atherapeutic community for drug addicts. Initially the detention blocks were present and two barracks, then complemented by a third barrack an dagarage. Recently the structure to accommodate detainees who are mothers with their children also became available. The institute is one of the best equipped in Italy for the care of disabled prisoners and of people with mental impairments, since it is equipped with an advanced clinical center and a section for psychiatric observation, among the largest in the country.

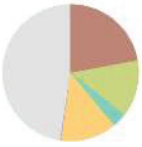
Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

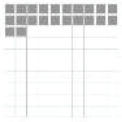
Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages



22% Buildings
48% Circulation areas
13% Bordered open spaces
0% Outdoor parking areas
13% Green spaces
4% Outdoor sports areas

Built/Unbuilt spaces



Profile n. 3 Lorusso e Cutugno - Turin. Region of Piedmont, IT (Photo: Google Maps)

Construction started: around 1980
Total surface: 264, 459 m^2
Capacity: Regulatory 1,178
Real Capacity: 1,150
Distance (city center): 2.4 Km
Women: 43
Foreigners: 231

Gyms: 7
Classrooms: 25
Theaters: 1
Libraries: 6
Housesof worship: 4
Laboratories: 4
Production Workshops: 2
Canteens: 0

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

The prison was built during the 1980s, finished in 1995 and opened in 1996. The building typology consists of the separation of buildings: various autonomous blocks forma massive concrete structure. The complex also has with a cell equipped to accommodate a mother and her baby and, despite the last entry, dates back to about a year ago.

Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

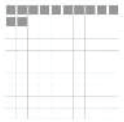
Functional sites

Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages

12% Buildings
33% Circulation areas
4% Bordered open spaces
9% Outdoor parking areas
40% Green spaces
2% Outdoor sports areas

Built/Unbuilt spaces



Profile n. 4 Pagliarelli - Palermo. Region of Sicily, IT (Photo: Google Maps)

Construction started: 1990
Total surface: 158,422 m²
Regulatory Capacity: 468
Real Capacity: 552
Distance (city center): 2.3 Km
Women: 0
Foreigners: 185

Gyms: 1
Classrooms: not specified
Theaters: 1
Libraries: 3
Houses of worship: 3
Laboratories: 1
Production Workshops: 0
Canteens: 0

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

The typology of the prison is compact, and the complex contains two sections with high security. Since 2005 a section is also available for people with physical disabilities, without architectural barriers and equipped with hand rail and protection elements. Currently a new part is under construction, and it is expected to house 200 detainees.

Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages

13% Buildings
29% Circulation areas
6% Bordered open spaces
5% Outdoor parking areas
39% Green spaces

Built/Unbuilt spaces

Profile n. 5 Parma - Region of Emilia Romagna, IT. (Photo: Google Maps)

Construction started: Bourbon Age (first building), 1834 (Panopticon structure)
Total surface: 76,025 m2
Regulatory Capacity: 572
Real Capacity: 347
Distance (city center): 1.2 Km
Women: 0
Foreigners: 35

Gyms: 0
Classrooms: 13
Theaters: 1
Libraries: 2
Houses of worship: not specified
Laboratories: 0
Production Workshops: 0
Canteens: 0

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

The prison is placed in the city center, and can be easily reached by public transport. The typology of the structure is panopticon, and is made up of eight branches divided into nine sections, but currently just six are in use.

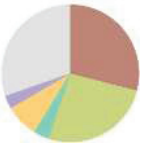
Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

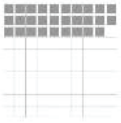
Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages



29% Buildings
30% Circulation areas
8% Bordered open spaces
3% Outdoor parking areas
26% Green spaces
4% Outdoor sports areas

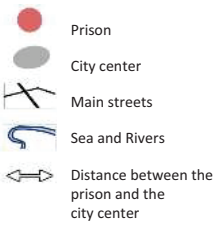
Built/Unbuilt spaces



Profile n. 6 Ucciardone - Palermo. Region of Sicily, IT. (Photo: Google Maps)

Construction started: 1474, Medici Age
Total surface: 14,951 m²
Regulatory Capacity: 187
Real Capacity: 140
Distance (city center): in the city center
Women: 0
Foreigners: 54

Gyms: 0
Classrooms: 13
Theaters: 1
Libraries: 1
Houses of worship: 1
Laboratories: 1
Production Workshops: 0
Canteens: 0

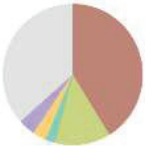


The ancient wall and towers, built during the 15th century, characterize the fortress aspect of the prison.. Its typology can be represented by the courtyard building. Due to its position, historically strategic for the control of territory, the complex still serves as a reference element in the landscape.

Access and control system

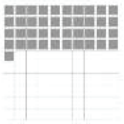
Functional sites

Percentages



41% Buildings
37% Circulation areas
3% Bordered open spaces
4% Outdoor parking areas
13% Green spaces
2% Outdoor sports areas

Built/Unbuilt spaces



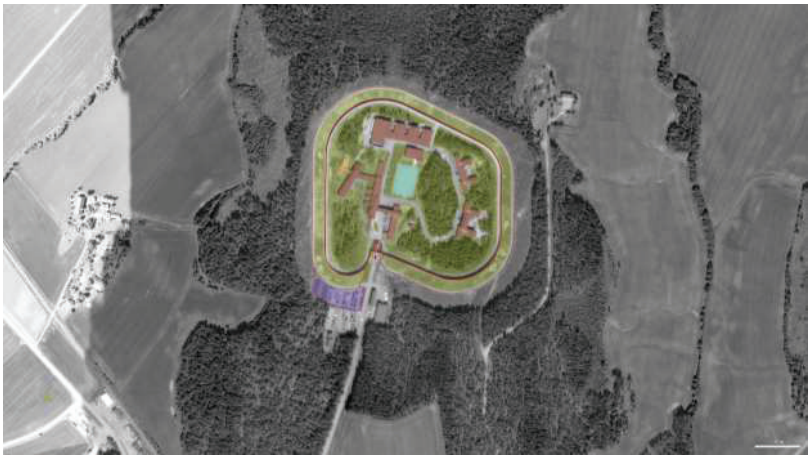
Profile n. 7 Volterra - Pisa. Region of Tuscany, IT. (Photo: Google Maps)

Construction started: 2006/2009
Total surface: 163,623 m²
Regulatory Capacity: 252
Real Capacity: 259 (because of some doublets)
Distance (city center): 6 Km
Women: 0
Foreigners: 91

Gyms: 4
Classrooms: 14
Theaters: 1 (Gyms)
Libraries: 1
Houses of worship: 1
Laboratories: 8
Production
Workshops: 3
Canteens: 0

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

Halden Prison was opened in 2010. The prison was built because of the need for more prison it is capacity,rather than because of ideological innovation. The prison has a new building mass. It is known for its aesthetic design, and is modern and minimalistic with art and light furniture to reflect a humane prison environment. The focus on rehabilitation and motivating prisoners in their own rehabilitation is reflected inthe architecture, the use of the buildings, and to some extent the prison landscape.The right to the same services regarding health, school, work and social benefits has also affected the shape and form. Halden was, when it was built, Norway's most technological prison. The prison is placed in the countryside, and the topographic surroundings are characterized by forest.



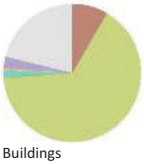
Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages



8% Buildings
21% Circulation areas
<1% Bordered open spaces
3% Outdoor parking areas
66% Green spaces
2% Outdoor sports areas

Built/Unbuilt spaces

Profile n. 8 Halden Prison. Region of Østfold, NO (Photo: Google Maps)

Construction finished: 1851. (A new building was built in 1922, and a new activity building in 2013. The prison is now under restoration.)
Total surface: 42,392 m²
Regulatory Capacity: 223
Real Capacity: 392
Distance (city center): 2.3 Km
Women: 0
Foreigners: 60%

Gyms: 1
Classrooms: 9
Theaters: 0
Libraries: 0
Houses of worship: 1 room available for this purpose
Laboratories: 0
Production Workshops: 5
Canteens: 0

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

Oslo Prison is considered the first modern cell prison in Norway. The prison marked the change from corporal punishment to a focus on the soul through regret and change of life.The architect was HE Schirmer and the style was Gothic Revival. Inside, the prison is inspired by the Philadelphia System (see Fridhov and Grøning, chapter 13). As the city of Oslo expanded, the prison became positioned in the downtown city center of Oslo. Parts of the prison arenow closed because of old building mass.

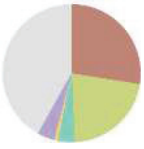
Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

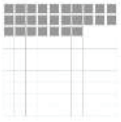
Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages



27% Buildings
42% Circulation areas
1% Bordered open spaces
4% Outdoor parking areas
22% Green spaces
4% Outdoor sports areas

Built/Unbuilt spaces

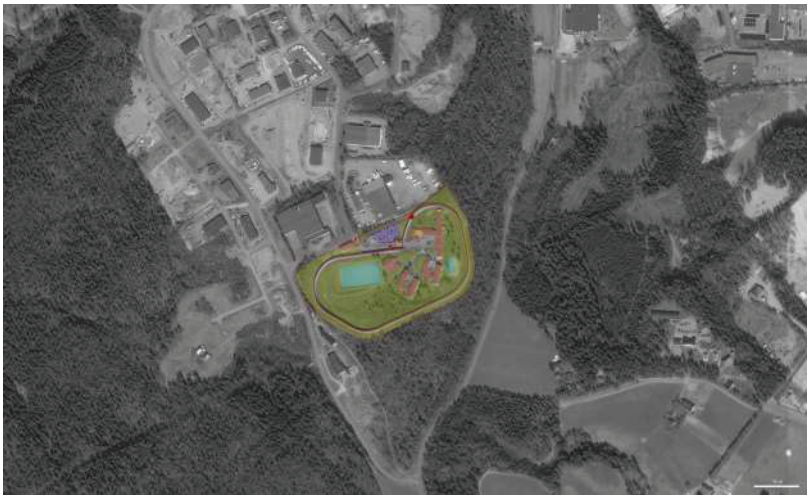


Profile n. 9 Oslo Prison. Region of Oslo/Akershus, NO (Photo: Google Maps)

Construction finished: 1993
Total surface: 780.14 m^2
Regulatory Capacity: 82
Real Capacity: 69
Distance (city center): 4.5 Km
Women: (own prison with a capacity of 18 located in Kragerø)
Foreigners: 18

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

Skien prison is a middle-sized prison. It is a high security prison with one division for special security. The prison has a focus on dynamic security, meaning that relations create security. The prison states that it is important that the prison officers relate to and communicate as much as possible with the prisoners during the day. At the same time, static security is on a high level.



Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

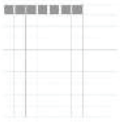
Functional sites

Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages

7% Buildings
19% Circulation areas
1% Bordered open spaces
2% Outdoor parking areas
65% Green spaces
6% Outdoor sports area

Built/Unbuilt spaces



Profile n. 10 Telemark Prison Division Skien. Region of Vestfold, NO (Photo: Google Maps)

Construction finished: 2014
Total surface: 4,761 m²
Regulatory Capacity: 4
Real Capacity: 4
Distance (city center): 16 Km
Women: 1
Foreigners: 1

Gyms: 0
Classrooms: 2
Theaters: 0
Libraries: 0
Houses of worship: 0
Laboratories: 1
Production Workshops: 1
Canteens: 0

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

This is a new prison built with new standards. It is characterized by aesthetic minimalism with open space areas, art, some design furniture, wooden floors and a variation of rooms that children and youths can use. The windows are open and without bars. The prison combines open space with electronic surveillance. The prison has to some degree elements of "green ideology" with some animals and vegetables outside. The prison is located next to Bjørgvin Prison. It is placed outside Bergen center along with some other institutions,schools etc. The surrounding landscape is country side and some forest.

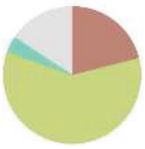
Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages



21% Buildings
16% Circulation areas
0% Bordered open spaces
0% Outdoor parking areas
59% Green spaces
4% Outdoor sports areas

Built/Unbuilt spaces

Profile n. 11 Youth Unit West Bjørgvin. Region of Hordaland, NO (Photo: Google Maps)

Construction finished: 1864, rebuilt after the big city fire in 1904 and then in 2017.
Total surface: 1,499 m²
Regulatory Capacity: 27
Real Capacity: 27
Distance (city center): in the city center
Women: 0
Foreigners: 14

Gyms: 1
Classrooms: 2
Theaters: 0
Libraries: 0
Houses of worship: 0
Laboratories: 4
Production Workshops: 0
Canteens: 1

Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

Ålesund is one of the oldest prisons in Norway. It is a small prison. As the city expanded it is now located in the center of the city. It is like a small city house and from some of the cells the prisoners can hear and see people on the street. The prison is narrow and impractical with an old building mass. It was built at the same time as Oslo Prison, at a time when prisoners were isolated and when a focus on the soul wasa goal (Fridov and Grøning, chapter13).The exercise yard is small and narrow with fences all around.

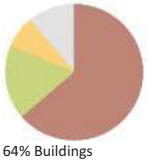
Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

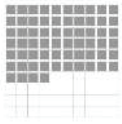
Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages



64% Buildings
11% Circulation areas
8% Bordered open spaces
0% Outdoor parking areas
17% Green spaces
0% Outdoor sports areas

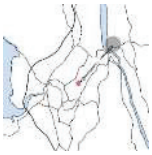
Built/Unbuilt spaces



Profile n. 12 Ålesund Prison, City of Ålesund, NO (Photo: Google Maps)

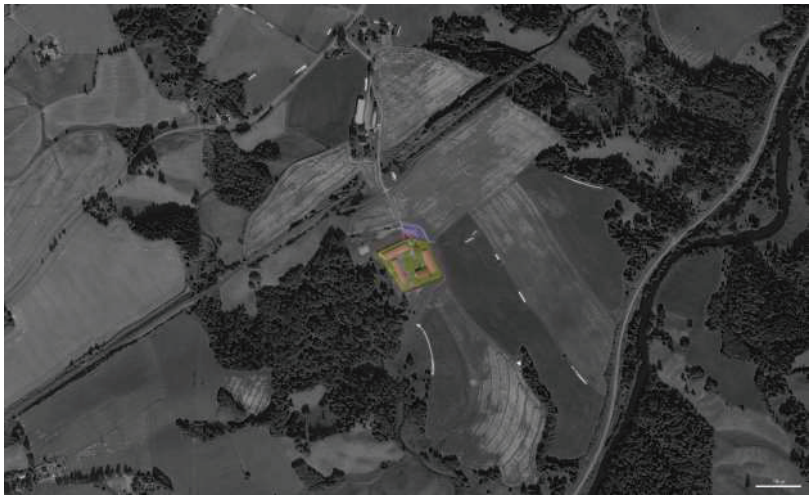
Construction started: 2009/2011.
Rebuilt as a prison in 2015/2016.
Modified in 2017.
Distance (city center): 4.3 Km
Total surface: 11,643 m²
Regulatory Capacity: 4
Real Capacity: 4
Women: 0
Foreigners: 0

Gyms: 1
Classroom: 3
Theater: 0
House of worship: 0
Production workshops: 0
Laboratories: 1 hobby room
Kanteens: 1 kitchen
Control room: 1



Prison
City center
Main streets
Sea and Rivers
Distance between the prison and the city center

This was originally an institution for elderly people and then asylum seekers. In 2016 it was opened as a prison for children and youths. It is a part of Ullersmo Prison. The prison has a lot of space, much of it unused. A focus on rehabilitation and motivating prisoners in their own rehabilitation is not reflected much in the architecture, rather more in the use of some of the buildings and the services offered. The prison is placed far away from the city of Oslo, out in the countryside.



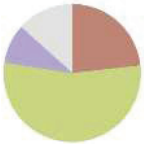
Access and control system

Light metal fences
Heavy metal fences
Walls
Guard Towers
Entrances

Functional sites

Buildings
Circulation areas
Bordered open spaces
Outdoor parking areas
Green spaces
Outdoor sports areas
New construction areas

Percentages



23% Buildings
14% Circulation areas
0% Bordered open spaces
9% Outdoor parking areas
54% Green spaces
0% Outdoor sports areas

Built/Unbuilt spaces

Profile n. 13 Eidsvoll Youth Unit East, NO (Photo: Google Maps)

Prison Size, Territory, Fences and Landscape

What is classified as a "small", "medium" and "large" prison is different in Italy and Norway. A big prison in Italy could house more than 1,000 prisoners, while the biggest prison in Norway accommodates 300. However we have to consider that Italy has about 60 million inhabitants and Norway about 5 million. Since the surface areas in sq.km. for Norway and Italy are not so different (385,203 and 301,338), the density in Italy is about 200 inhabitants per sq.km. while in Norway it is only about 14 inhabitants per sq.km. Not only are the numbers different, but also the concept of prison design. In our analysis we have therefore modified and used size (big, medium and small) in a way that seems relevant within both the Italian and Norwegian systems.

Initial data from the comparisons show that the position of the prisons in the territorial context has been modified as time has gone by. The choice of the areas devoted to prison complexes moved from the center of the cities in Italy to suburban and rural areas over the years. That fact emerges particularly in the Italian case studies. In fact, the ones placed inside the historical urban pattern of the city ("center of the city" in Chart n. 1) are, in Italy: the prison of Volterra, constructed during the Medici Age (more precisely, 1474) in the center of a small village; and the Ucciardone Prison in Palermo, erected during the Bourbon Age (1734 to 1860). An urban area was also utilized in the construction of Poggioreale prison in 1905.

In the second half of the 20th century, prisons started to be erected in suburban areas. Here we find Rebibbia, built in an area that was rural at the time of construction (started in 1946), and which is now the suburban pattern of the city of Rome. Also, Lorusso e Cutugno Prison (around 1980) is in the suburbs of the city of Turin, and the Pagliarelli prison (also around 1980) is in the suburban area of the city of Palermo. In Norway, both Oslo Prison and Ålesund Prison, built in 1851 and 1864, were originally placed outside the city, but since the city expanded they are now located within the center of the city.

In rural areas, we find prisons built in the last three decades, in Italy as well as in Norway. This is the case in Parma in Italy (1990), and in Norway in Telemark (1993), Halden (2010), the Youth Unit West, Bjørgvin (2014) and the Youth Unit East, Eidsvoll (2016).

These findings confirm that, in these cases, there is the will to move, or to build, prisons far from the consolidated city, away from people and their sight,

preventing integration with community life. The prison is "something" that nobody wants "in his backyard", as illustrated in the model below.

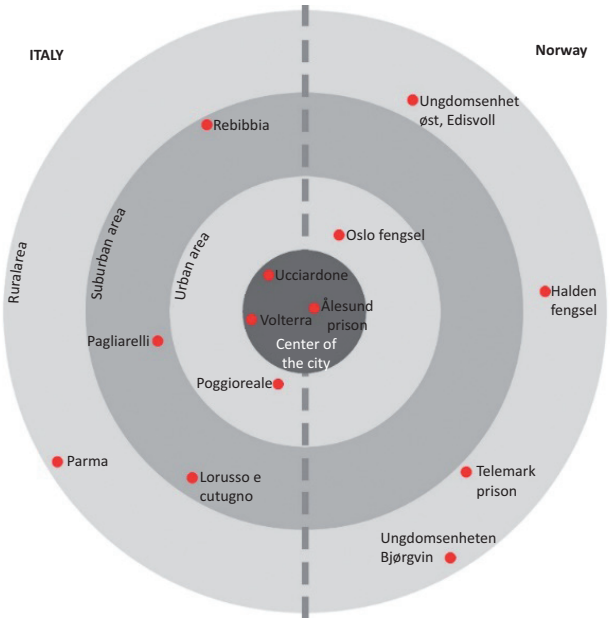


Figure 3.14 The prisons in the territorial context: Comparison of placement

Analyzing the morphology and typology of the fences in the various prisons, we found that, for the external ones, straight and linear fences were used, in some cases curvilinear barriers, and sometimes a combination of both types. In the chart below, we show the use of three kinds of fences (light metallic ones, heavy metallic ones, and walls), and the presence of internal barriers, separating the parts of the prisons.

With respect to morphology, we point out that only in Norway did we find external barriers that were totally curvilinear (Halden Prison, Telemark Prison, and the Youth Unit West at Bjørgvin). While in Italy, most of the case studies show a system of straight external fences (Poggioreale, Rebibbia, Lorusso e Cutugno, Pagliarelli, Parma).

This shows us the attention given to the external image of the prison: the straight linear, barrier is used to mark the strength of the punishment authority, and the separation intent. On the other hand, the curvilinear barrier

suggests a more welcoming environment. Contemporary Italian experimental design seems to be heading in this direction (see the project presented in chapter 7), nevertheless recent prototypes presented by the Italian Penitentiary Administration still adopt a straight linear plan (see Giofrè, chapter 6).

Internal barriers are mostly an Italian feature, existing in all case studies, except Volterra, while in Norway they are only present in Oslo Prison. This reveals something interesting about the cultures of Italy and Norway in rela-

			ITALY							NORWAY					
			Poggioreale	Rebibbia	Lorusso e Cutugno	Pagliarelli	Parma	Ucciardone	Volterra	Halden Fengsel	Oslo Fengsel	Telemark Prison	Ungdomsenheten Bjørgvin	Ålesund Prison	Ungdomsenhet øst, Eidsvoll
External fences	Morphology		X	X	X	X	X	X	X		X			X	X
								X	X	X		X	X		
	Typology			X		X	X			X		X	X	X	X
					X	X	X	X			X				
			X	X				X	X	X		X		X	
Internal Fences	Typology														
					X	X					X				
			X	X		X	X	X							

Legend

Straight fences

Curvilinear fences

Light metal fences

Heavy metal fences

Walls

Figure 3.15 Prisons complex: Comparison of the fences

tion to penitentiary ideology and prison architecture. Below we see an illustration of the types of fences in the various prisons in Italy and Norway.

Comparing the sizes of the functional sites (buildings, circulation areas, bordered open spaces, outdoor parking areas, green spaces, outdoor sports areas, and new construction areas: see chart n. 2) of each structure, we found that the percentages are quite varied, but there are some common aspects.

With respect to the availability and use of green and sports spaces, the smallest percentages are in Poggioreale (4% green spaces and 1% outdoor sports areas, devoted to a football field), and in Volterra, where a small outdoor courtyard is used as a walk-in area with gym equipment, a bowling alley and a small concrete football field (13% green spaces and 2% outdoor sports areas). In Lorusso e Cutugno prison (13% green spaces and 4% outdoor sports areas), the outdoor spaces are well equipped, and an outdoor area for talks with underage sons is available. The same percentage is available in Ålesund Prison (17% green spaces). For between 20% and 30 % of green and sports spaces, we find two ancient prisons: Oslo Prison, where the green spaces are well maintained but not cultivated, and two football fields (22% green spaces and 4% outdoor sports areas); and Ucciardone, where similarly the green spaces are well maintained but not cultivated, and there is a playground for detainees with children under 14 years (26% green spaces and 4% outdoor sports areas). Three Italian prisons and one Norwegian have a percentage of green and sports spaces of between 40% and 60%: Pagliarelli, with several cultivated green areas and outdoor sports places, and an outdoor area for talks with relatives (40% green spaces and 2% outdoor sports areas); Parma where the several green spaces are well maintained but not cultivated (39% green spaces and 5% outdoor sports areas); Rebibbia, with several cultivated green areas and outdoor sports places, and, in the female section, a playground available for children (40% green spaces and 7% outdoor sports areas); and, in Norway, the Youth Unit East at Eidsvoll (54% green spaces, and no outdoor sports areas).

The three prisons that show the biggest percentages of green and sports areas are all in Norway: the Youth Unit West Bjørgvin, where the green areas are partially devoted to animals and vegetables cultivation (59% green spaces and 4% outdoor sports areas); and Halden Prison, where the green spaces are well maintained but not cultivated, and there is a football field (66% green spaces and 2% outdoor sports areas). The greenest prison, among the ones analyzed, is Telemark, where the green spaces are well maintained but not

cultivated, and two football fields are available (65% green spaces and 6% outdoor sports areas).

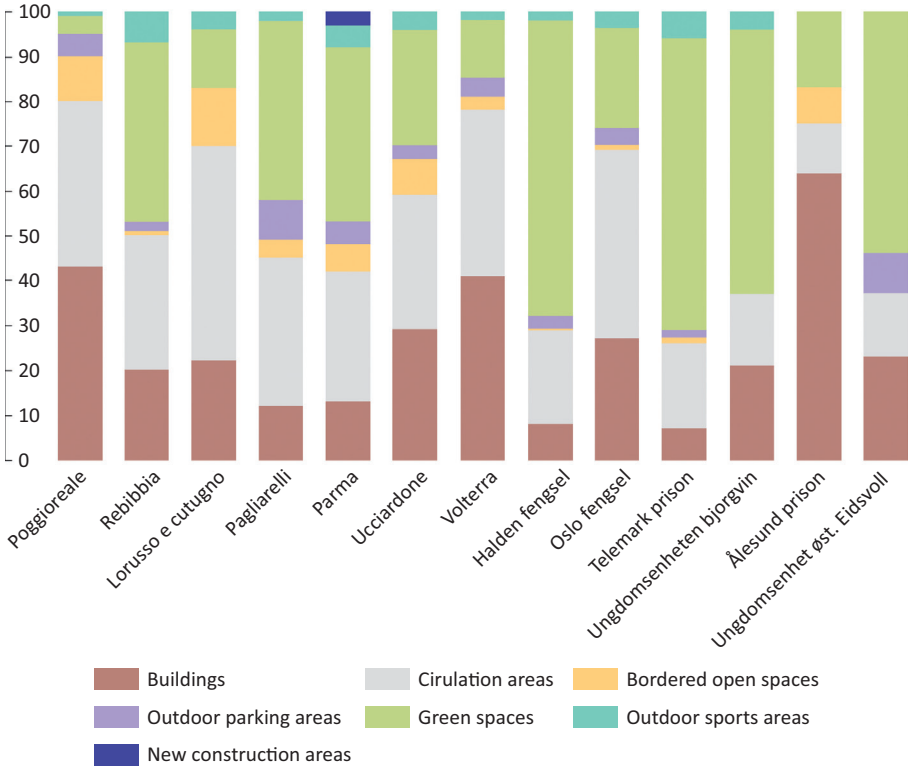


Figure 3.16 Functional sites: Comparison of percentages

In addition, the presence of exercise yards, also called bordered open spaces, is much more common in the Italian case studies than in Norwegian ones, according to each detention regulation.

One important thing to stress here is how the green spaces are used. Are the prisoners allowed to use them? In what way? And when? In chapter 4 such questions are asked and Johnsen finds that despite big green areas most of them are, in practice, not possible to use by the prisoners because of security issues. The use of green areas and outdoor sports areas are issues in prison research that need to be addressed.

Furthermore, when we started to make comparisons regarding inside spaces, we saw an interesting difference. Analyzing the different functions of

various prisons, we saw for instance that in Italy *theater* is a concept, which is not a type of room that we find in the Norwegian prisons. This does not of course mean that prisoners do not have theater activities in the Norwegian prison system, or that it is always present in the Italian prison system, but these all interesting details reveal something about the cultural values and ways of thinking about prison ideology, and the purpose of penalty.

Final comments

It is important to emphasize that resemblances and differences are not objective phenomena that are easy to grasp. Rather, something is developed through a process of comparison (Krogstad, 2000). In this article we have used the software Google Earth Pro to increase our knowledge of prison architecture, territory and space. There are of course some limitations to this type of comparative analysis. In this case it is particularly due to the way we, in different countries, classify and what counts in the classifying process. The first thing we do when we try to learn about a foreign system, is to start to examine whether it is different or equal to our own system, and in which way. In this analysis we have chosen to use a tool developed within the Italian context (Giofrè, 2015). In this article we have modified it to be able to construct representations for both the Italian and the Norwegian prison systems. The analysis is biased since Norway is being compared to an already existing Italian classification system. On the other hand, this has resulted in interesting knowledge, and has been an eye opener for us that we will develop in later research. Comparing two different countries with different histories, religions, socio-political systems, social classes and cultures related to nature and observing deviance, guilt and shame, it was difficult to know where to start. With all its limitations, this article reveals how much the architecture of prisons responds to the penitentiary regulation criteria of each country, which, in itself, expresses the social and cultural aspects of a country.

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