

The first book in this set: *Designing for a European City*, sets out to define a framework based on major theories and observations made by various notable authors and architects throughout architectural history. Various aspects of each of these observations and theories contribute to an approach that aims to form a basis for thoughtfully designing within the old, existing European cities. Through notions of city models, morphology and placemaking, *Designing for a European City* defines an approach that revolves around the continuation of the European city in an organic, non-disruptive manner, in order to create a sense of wholeness and pleasantness within the city.

DESIGNING FOR A EUROPEAN CITY

- A Theoretical Framework -



Nick van Garderen

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Theoretical Research towards an approach for the
production and regeneration of areas within European Cities.

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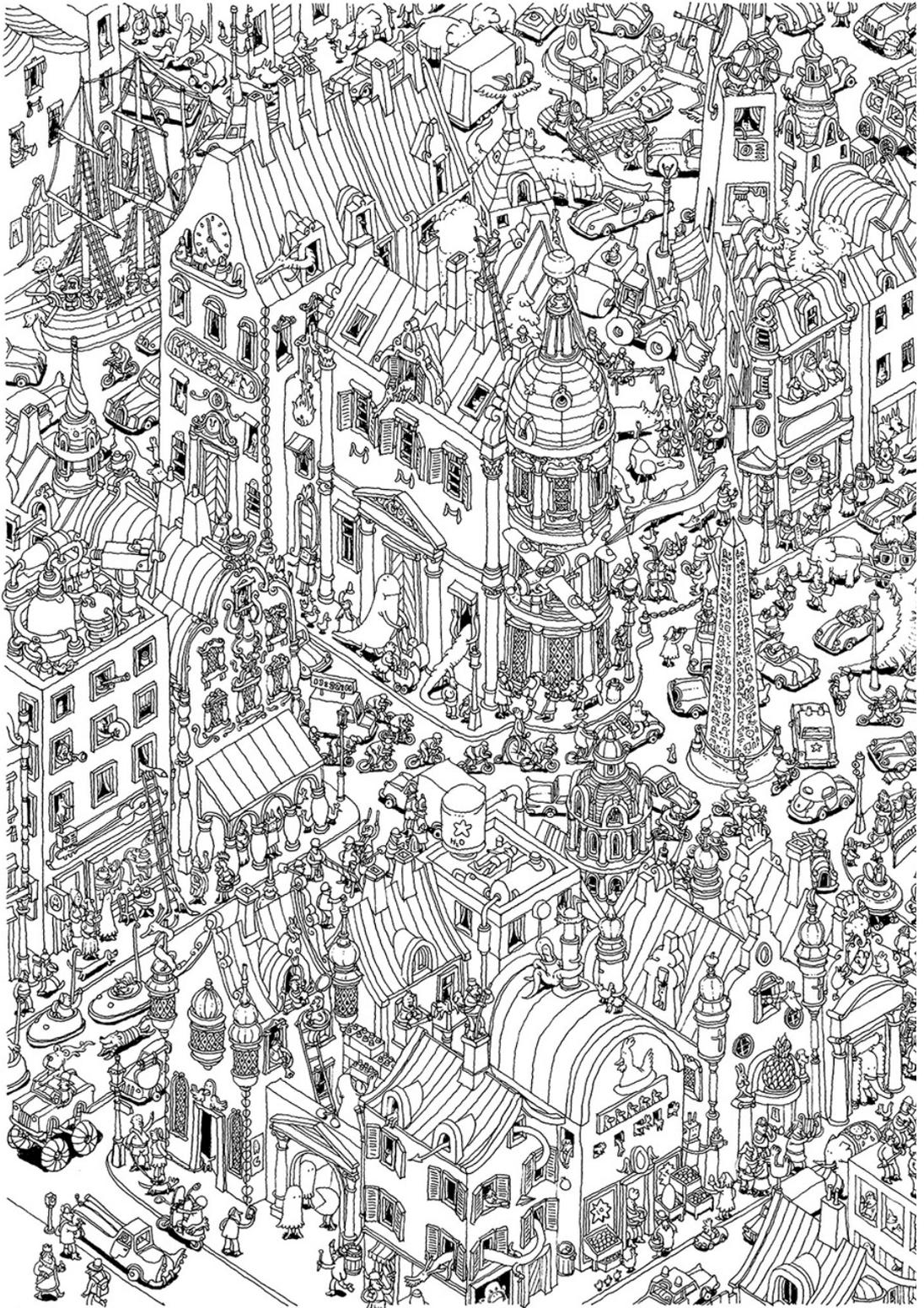


Figure 0.1: "The Average Generic European City" by Mattias Adolfsson (2018)

A THEORETICAL APPROACH TO DESIGNING FOR A EUROPEAN CITY

As the cities on the European continent continue to develop, we are increasingly dealing with the patchwork that they have become over the last century. Creation of new structures and areas within and additions to the city emerged rapidly. Some of these areas developed during the past decades are increasingly found more inadequate and dysfunctional within the grand ensemble that is the European city. They became areas known for their loss of urban values, neglect of the virtues that are attributed to the traditional European city as examined in the works of Benevolo and Bagnasco. It sets these areas apart from the European city, related to it only due to proximity rather than through sense and character.

Past decades have been coloured by the proliferation of regenerative projects, aimed to enhance the quality of these areas and to draw these areas back into the city they belong to, all based on various approaches and theories. At the same time while these projects continue, the cities on our continent continue to see ongoing growth and need for expansion. This duality of Urban Developments occurring simultaneously in our cities is a phenomenon already noted in 1982 by Harold Carter in his *"Introduction to Urban Historical Geography"*. Throughout the past decades a wide catalog has emerged of impressive studies to refer to in the elaboration of an urban theory in regard of how to approach these developments.. This multitude of approaches with variable levels of success showcase that it is necessary to gather these studies, and take note of what they suggest about the construction of a general frame of reference, in order to apply this knowledge to a specific urban theory that deals with adapting existing and creating new areas within the European city in such a way that they do not end up like so many of the areas we can pinpoint nowadays as being inadequate and dysfunctional.

As a result of this approach, in the basis there is perhaps nothing new in all of which is stated in this literature analysis. However, in combining the findings and observations of the various writers accredited in this book, recurring and interacting themes that are of particular significance can be defined. These themes could ultimately form a base for an approach towards designing in or for a European city. A theory that, perhaps additionally to approaches of recent years, once again considers

the city as a spatial structure and sees urban theory as one that is of spatial nature first and foremost. This work will thusly refer to writers from diverse fields who have elaborated theses considered fundamental in regard of forming a comprehensive theory about designing in and for the European city.

The theory that is derived in this book is one that considers itself thusly as one of spatial nature in regard of the continuation or multiplication of values present in the grand ensemble that is the European city. In essence a normative theory in regard of formmaking for and in the European city, derived from complementing, fundamental urban and architectural theories of the past centuries.

At the heart of this theory lies the importance of the public space and those factors that constitute it and are influential in the production of this public space. This book will examine the production of this public space through the production two separate parts that together make up this public space and will deal with both of these accordingly. These notions are the 'mass' of an area, known also as the 'dwelling area' (Rossi, 1966) or the 'Res Economica' (Krier, 2009), and the public buildings that constitute the area, also referred to as 'Primary Elements' (Rossi, 1966), 'Res Publica' (Krier, 2009) or 'Quartermasters' (Gramsbergen, 2014). Through examination of themes such as Urban Tissue, Urban Form, Morphology and Typology, this book tries to combine the findings of various theorists to find a spatial basis for the production of new or adaptation of existing areas in the European city.

This theory, as should be noted, is thusly one that prioritizes spatiality over economic, environmental and social factors, but in doing so does not argue for the negation of these factors. With this definition in mind, the urban theoretical scheme presented is, as stated before, an approach and must be seen as such. It forms a tool of guidance rather than an absolute truth, a base upon which design within and for a European city can be founded. This approach as derived from urban theories of the past should then thusly be evaluated within this framework as a tool of guidance that can be applied to various designbriefs and locations within the European continent rather than form an absolute truth in this regard.

Nick van Garderen



THE CITY MODEL AS A BASE FOR DEPARTURE

The European city, or the city in general, is a subject matter that can be studied in various ways and from different fields of interest and research. The analysis of the design of the city in this study and specifically the design for the European city focusses on the spatial component as a source of departure for the design of the city. This notion of form as the basis for the development of cities is most definitely not new nor only attributable to a certain period in the history of architecture and urbanism. Though at first glance perhaps, the city in various centuries has seemingly substantially different spatial outputs, a brief overview of a few of the most influential form-based ideals in regard of the production of urban space showcases that most definitely a common ground or trend can be seen in these plans and observations that lay at the basis of every European City. Understanding and finding this base of the city, offers insight in the meaning of the urban structure at hand, and is thusly an important part of departure when designing for the city (Barke, 2018). Though various overviews have been drafted by authors such as Leonardo Benevolo (1993), the understanding of the most basic models or archetypical models that lay behind the configurations seen in European cities today is of such essence as a point of departure in the approach for designing as a continuation of the existing city, that a short iteration is offered here as well. This chapter will, in order to illustrate the deriving of these archetypical models, thusly offer a brief overview of a selection of city plans and models throughout the ages that are most often dealt with in the studies of –ideal- city models. As with the majority of these studies, this chapter will, after a short examination of the origins of the city plan, begin with the examination of the classical Greek city.

THE ORIGINS OF CITY PLANS AND THE CLASSICAL CITIES

The origins of architecture and urban design have been debated and subjected to myth ever since its course and history have been studied and recorded. The most famous of these might be the Origins of Architecture as debated by Vitruvius in his *“Ten Books on Architecture”*. In these works Vitruvius states that the accidental discovery of fire led to the gathering of humans and the start of communication amongst each other, or as he referred to it, ‘the first assembly of mankind [...]

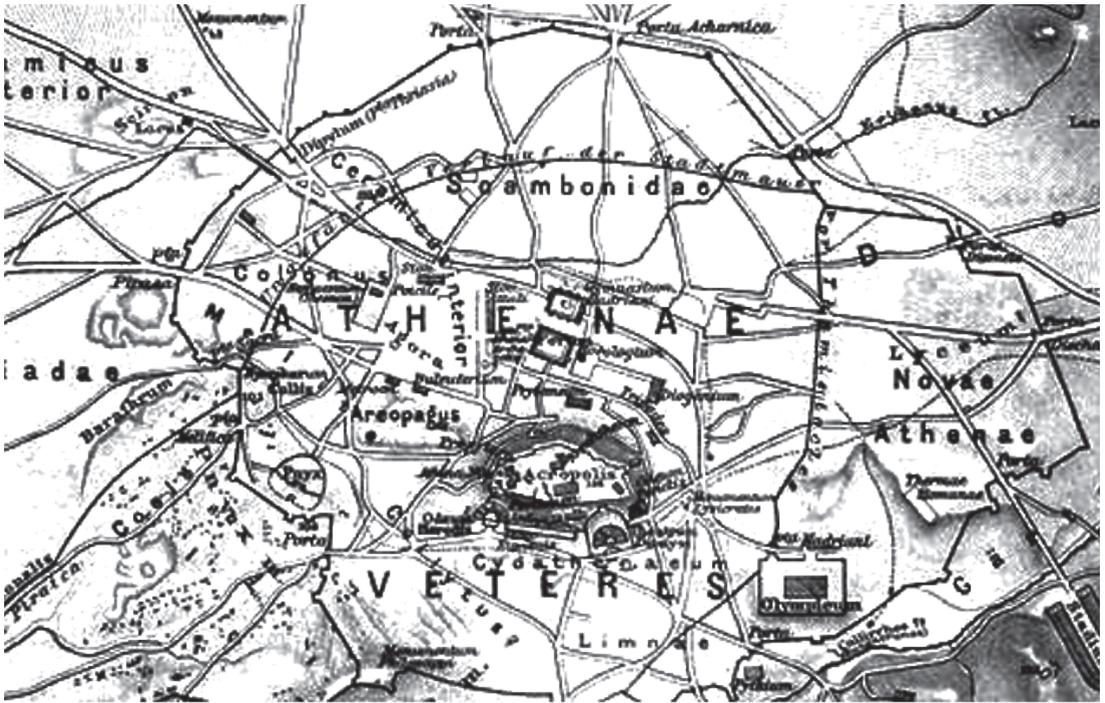


Figure 1.1: The more organic organization of the Greek 'Mother-City'; Ancient Athens

in a state of society'. The exact origin however remains debated but is often dated around the Neolithic period roughly 10.000 BC. After the Neolithic revolution the human race started to cultivate land and to herd animals, basically creating a society revolving around agriculture and production rather than exploiting. The cultivation and domestication created a possibility for denser human populations and thusly the creation of human settlement in larger groups or what could be deemed as the origin of cities (Bairoch, 1988). For the course of this book those settlements deemed 'cities' according to the criteria drawn up in "The Urban Revolution" (1950) by Gordon Childe will be examined. When examining the ancient settlements according to the ten criteria of Childe, the first settlements deemed 'cities' can be traced back to the territories of ancient Mesopotamia in the deltas of the rivers Tigris and Euphrates. Though many cities, originating as trading points, or important crossings within a travel network, developed organically, the classical and pre-classical period laid out the origins for a number cities that were to develop according to fixed plans. The Mesopotamian civilization around the third millennium BC was one of these pre-classical societies that took pride in the development of their cities, often pre-planned. One could thusly say that the origins of the European Planned City lay here in the delta of the Tigris and the Euphrates. As stated before about these origins, a lot has been written and even



Figure 1.2: The orthogonal, grid structure of the Greek Colony-city; Ancient Alexandria

more has been said. What is generally agreed upon is the conceptual idea of the first city model or plan; namely that of the orthogonal grid. This system, already put to use in the original Mesopotamian societies, was highly regarded and perfected by the Greek and Roman classical societies. As with all of the works and professions dealing with the examination and exploration of the past, only that which has survived albeit artifacts or written records on artifacts can be subjected to examination. The term artifact in this case refers to the presence of a work of architecture or a group of architectural works grand enough to paint an urban image or understanding of the workings and outlay of the settlement examined. Because of this, the 'original' invention of the city plan is often contributed to the Greek philosopher Hippodamus, regarded by Aristotle as the 'Father of City Planning', of which written records still remain today.

The Greek city planning focused itself mainly around the development along the Mediterranean coast where they founded new cities, often without an a priori context or origin. One could thusly state that the original foundations for what would turn out to be an ever ongoing debate across the European continent considering the plan of the city, were laid by our Greek and Roman predecessors. One of the better, if not grandest, examples of the idealized orthogonal urban model of the

classical Greek period was the city of Alexandria, as commissioned by Alexander and envisioned by Dinocrates, wholly based on the principles dictated by Hippodamus. As a colony of Athens, Alexandria was to be realized as a city that opposed the lack of geometric order that was lacking in the ancient city, whose urban form was deemed to appear disorganized (Khirfan, 2009). Of this disorganization Dicaearchus, visiting the Athens of the second century, said: "The streets are nothing but miserable old lanes, the houses mean, with a few better ones among them. Upon first arrival, a stranger would hardly believe that this is the Athens of which he has heard so much.". Nevertheless it was this urban form that Dicaearchus labeled 'disorganized' within which the greatest thinkers of the Hellenistic period lived and thrived. It was in the classical Athens that urban ideologies and origin myths of Architecture and Urbanism fully evolved. The myths surrounding the foundation of the city itself speak of its harmonious and organic relationship between the polis and its natural context, or as Aldo Rossi states, the first urban form that could be regarded as having a genius loci status (1984). In contradiction to this slowly evolved city was then, on the other side of the Mediterranean the city of Alexandria to be founded. Opposing the traditional Athens, Alexandria was to be a functionally founded city. This functionality already emerged in the very early stages of the founding of the city namely in the choice of site and the appointment of Dinocrates, student of Hippodamus of Miletus. The orthogonal city model as advocated by Hippodamus was thusly, through the hand of Dinocrates bestowed upon this blank site picked by Alexander himself. Between the Mediterranean sea and Lake Mareotis, Dinocrates laid down a regular, geometric grid perpendicular and parallel to the coastline. Within this regular grid two main roads were of major importance, the parallel Canopic street and the perpendicular Soma. Those aware of classical Roman city planning immediately recognize this configuration as the traditional Roman Castrum outlay with the Decumanus Maximus and the Cardo Maximus.

It was in the Greek orthogonal city model that the Romans saw convenience and upon which they imposed an early form of what later in urban theory was to be labelled 'zoning'. The Roman city model consisted of a basic, orthogonal city plan with a central forum that housed services. During their occupation of nearly the entire European continent, the classical Romans founded many new towns and cities that continued to grow the following centuries and that are still well-known European cities today. Many of these cities still have, in some way or another, traces of their Roman origins. One of the key example cities in which this Roman heritage and city model can be retraced is the Italian city of Turin. Founded around 28 BC as Augusta Taurinorum, the city was

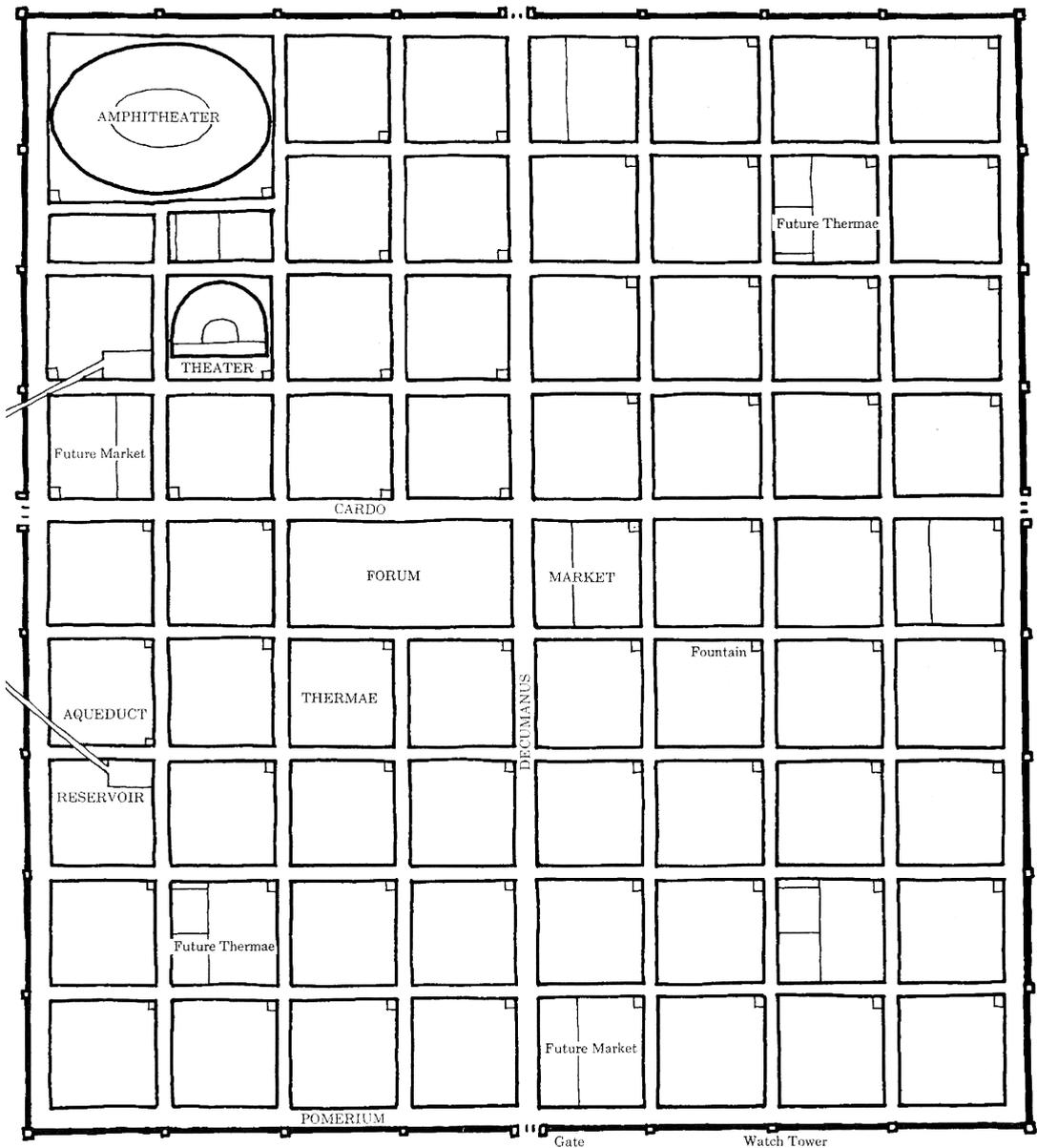


Figure 1.3: The clearly manifested Orthogonal, Grid structure for ancient Roman Camps and Cities; The Roman Castrum Plan

a schoolbook example of the many colonia cities founded in the Roman Empire. Within the city walls a regular, orthogonal grid was laid down in a four-fold principle with its four quadrants, divided through the parallel and perpendicular roads into insulas, or as later in theory referred to as 'urban blocks'. In maps as recent as the 19th century the Roman origins of Turin are specifically clear, even today one can experience the

orthogonal city model of the Roman colonia in the old town. For the Roman citizen the orthogonal grid model encompassed the idea of the ideal city, for Roman architects and planners it was the only true city model that was to be used and implemented whenever new towns were to be founded or town expansions needed to be made. The orthogonal city model and its accompanying philosophy around urban planning, seems to have been, for a larger part of early history, the only model that indicates planned cities and city interventions. With its origins in Mesopotamia and the improvement through the Greek, onto the Roman societies, the orthogonal grid city model was, until Medieval times perhaps the only present, and most certainly the dominant theoretical model on the European continent regarding planned urban development. Mumford (1961) advocated that it was the Romans that set the standard for what we call urban planning today.

THE CITY PLANS OF THE MIDDLE AGES AND RENAISSANCE

For a long time it was regarded that the entire idea of theoretical city models and urban planning in general was lost during the Middle Ages. It was deemed that until at least the thirteenth century the profession or act of urban planning did not take place (Abel, 2017). Whether this is the case is highly debatable. What can be said however is that there is a lack of remaining documentation from that time period regarding the founding, developing and expansion of cities in Europe. Leonardo Benevolo in his work *"The European City"* (1993), observes that it is after the Romans had laid down the foundations that, during the Middle Ages were to be shaped in a new kind of unifying City Model. According to Benevolo the reason for this was threefold: The city as an idea lost its general systematic connotation and became more radically adherent to its geographical and natural setting, the distribution of urban architectural and symbolic weight changed and was divided amongst the different parts of town and finally the transformation of the internal urban framework.

As stated before, only that which has survived, albeit artifacts or written records on artifacts can be subjected to examination. This means that it is not only remnants of written works that can be used to examine the process of urban development during the Middle Ages, but also all those works of architecture and their configuration within the city that still remain. To advocate a total loss of 'planning' within architecture and urbanism during this period of time however would be a too big of assumption to make, what can be observed however is the departure from the 'classical' City Models during this period. Even though there are few remnants of documents, there are some that indicate that there

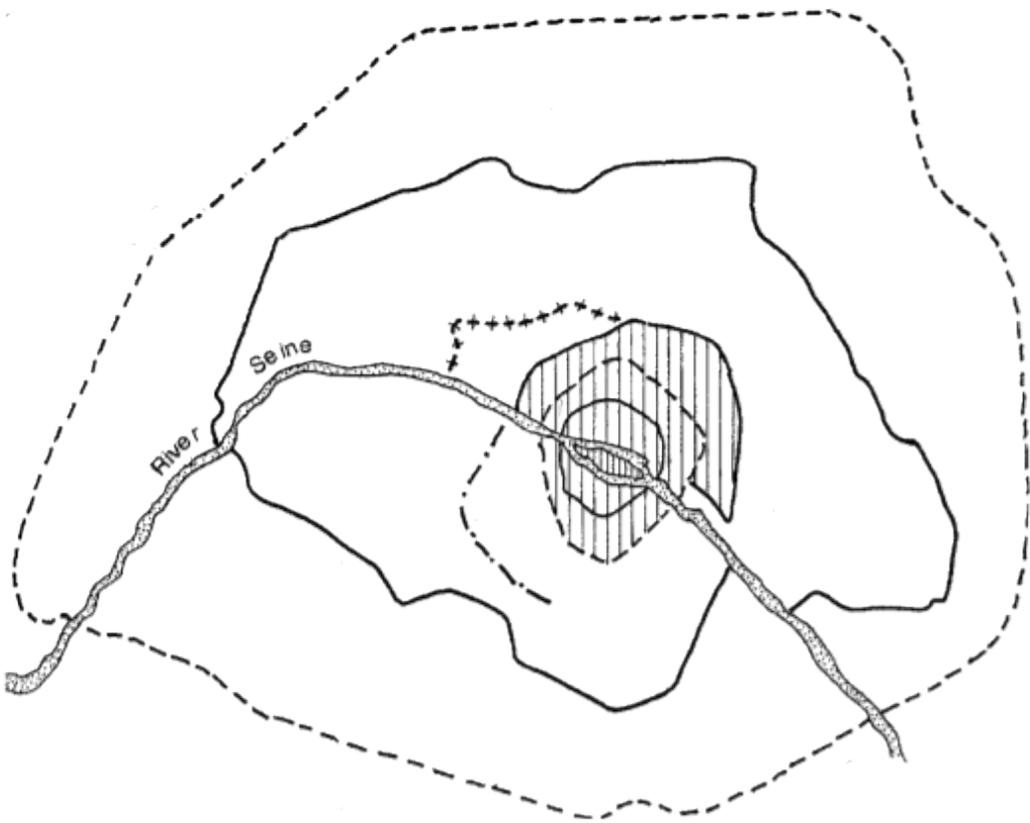


Figure 1.4: The Concentric outlays of Paris, an archetypical example of the expansion of the Medieval European 'Walled City'

was at least some sort of planning nature amongst the builders of Medieval society. The most famous and well-known of these documents by far is the Plan de St. Gall. The plan is one of the few surviving architectural documents with a major impact, drafted during this time period and thusly one of the few documents regarding planning that can be analyzed today. The plan itself dates back to around 820 AD, making it a piece of work that dates from the early Middle Ages. It is regarded not as a specific plan but as a general blueprint or solution for an ideal building configuration for monasteries all around the European continent. This shows that even during the period of time when the 'planning' profession was deemed to be lost, some sort of attention did go out to planning. Analyzing the Plan de St. Gall, one can find traces of water infrastructure and logical ordering of space, even discussing possible growth and extensions to the plan. In this sense perhaps one could say that the planning of Medieval Europe regarded itself more with rural and ecclesiastical planning rather than urban planning (Abel, 2017). However, this assumption is then made based on those few

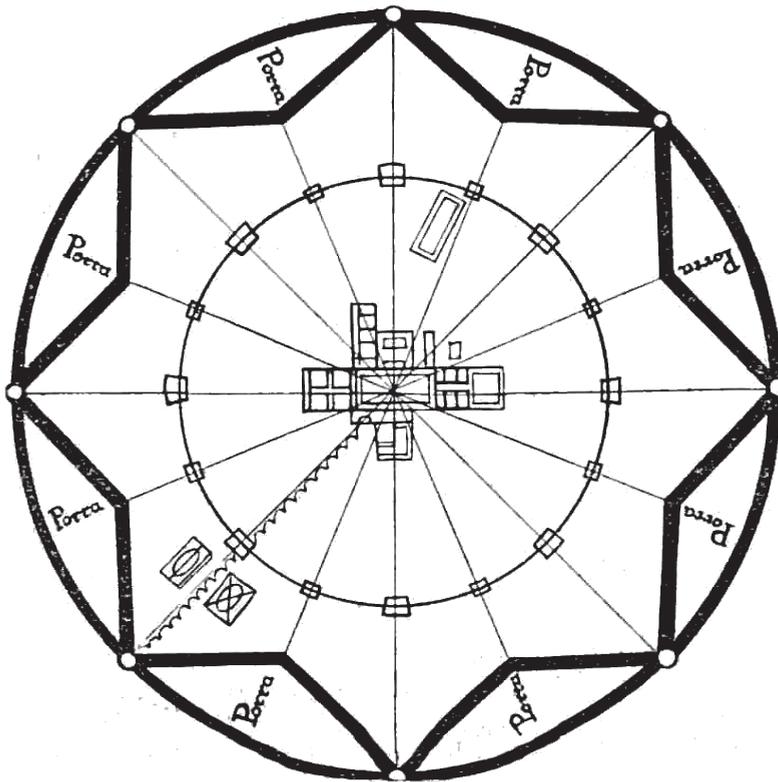


Figure 1.4: The Ideal Radial-Concentric City of the Renaissance; Sforzinda by Filaretto

surviving documents. In his work *"The Medieval City"* (2005), Norman Pounds does speak of a presence of planned cities during this time period. In this work, Pounds states that a majority of the planned cities that the classical Romans had scattered across the European continent had fallen to ruins after their retreat, their street plan survived in some form and imposed itself upon the cities that grew on these sites during the Middle Ages. The rigid orthogonal system that the Romans had left behind became distorted. Buildings stepped inward or outward from their original parcels and the streets were forced to bend with these configurations. New market squares and ecclesiastical sites were introduced within the remains or ruins of the Roman settlement, altering the original orthogonal grid plan even further. These configured grid plans can still be seen in various Roman developed towns, such as Trier, Germany, across Europe. It is these secular and religious public buildings that indicate that there was some sort of supervised urban planning as they were superimposed on the street-pattern present within the town. Though one can argue whether or not the introduction of these public works into the street plan can be considered urban planning in the sense that we define it now, it is hard to argue with the

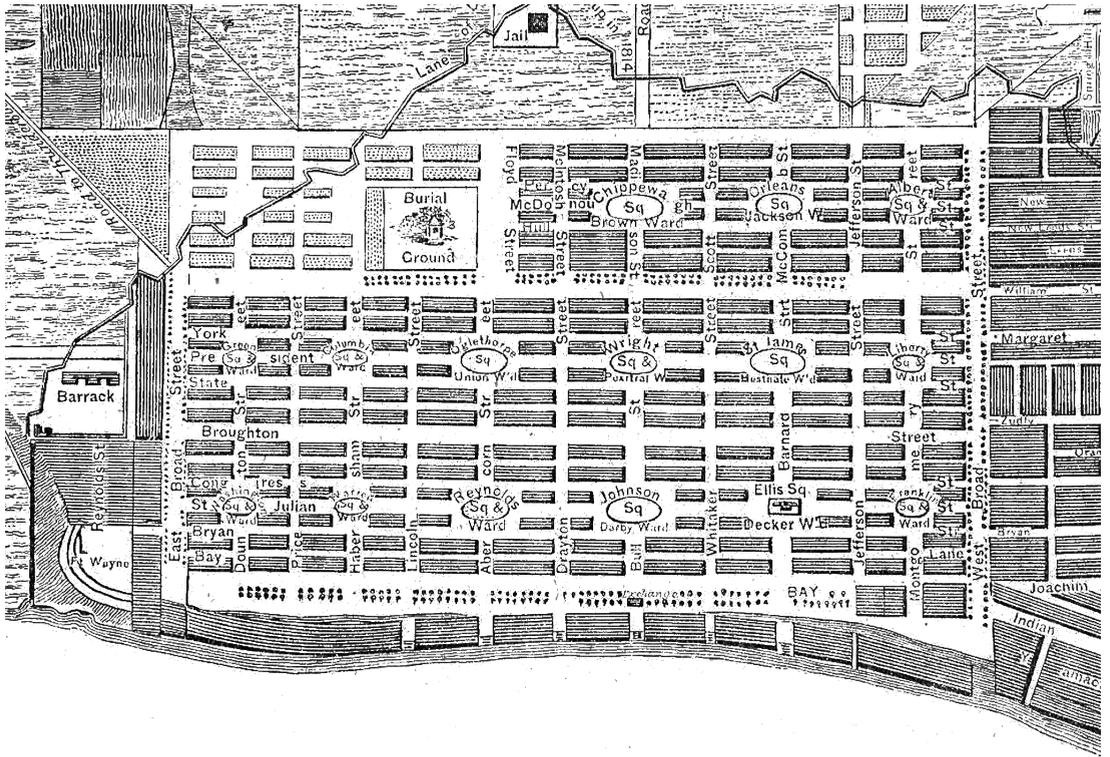


Figure 1.5: The reintroduction of the Orthogonal Ideal City in the America's during colonization; the Oglethorpe Plan

art of urban planning during the Middle Ages when it comes to the defense works of the “walled city” model. As the population of these European cities grew, it was necessary to expand the city outside of the original Roman town and new town walls were to be built, for most of the responsibility of the city in this time lies in the necessity of commerce and defence. It is here that the origin of the concentric model can be found, as a new wall is erected around the existing Roman walled town, which then was to be filled in. Examples of these towns can be found throughout Europe, two of the most notable might be Paris and Cologne. With its heightened appreciation of its rooting in a geographical and natural setting, combined with the unique European autonomous responsibility of cities as an entity of governance the foundations were laid down for the unique and wide range of designed urban settings (Benevolo 1993). The wall, that manifested in essence these European cities, in itself dictated the future growth of the city and in this case can thusly be seen as planned development of the city since it imposed restrictions upon the growth of the city. In the late Middle Ages the idea of the concentric model for an ideal city became even more prominent. As technology advanced, so needed the defense works

and layout plans in order to create cities that were defensible against the new, gunpowdered art of warfare. It is at this time that the concentric model reaches its apex with the introduction of the *Tracé Italienne*. The size and shape that the Medieval European city had grown into, or that had been achieved through design became a definitive character of the city in the late 13th century (Benevolo 1993). The 13th and 14th century showcase a strong push for stylistic uniformity, resulting in a more careful reading and observation of the city and its surroundings, not only present in the built form but also in the arts on the European continent. It is in this period, during the Renaissance, that documents which have survived the ravages of time start to dictate and theorize again about architecture and urban forms. Notable writers and philosopher-architects such as Leon Battista Alberti dedicate works to the ideal plans of architecture and urban development. Those concerned with urbanity during the Renaissance distilled the city into concepts, viewing it as an intellectual, objectivizable object, constructing it rationally (Solinis, 2006). It was in this period thus mostly in the figurative arts and in books that research on new urban models was carried out. At the heart of the new attitude and renewed interest among the artistic and philosophical community towards the city lay the wish to perfect the urban organism that characterized the European city: the manifestation of principal buildings and the organization of public space (Benevolo 1993). The use of perspective and the philosophy of illustration, descriptive geometry the views of a perfect city was now no longer just a matter of speech but one that was envisioned through plans as well. Though classical Greek philosophers such as Aristotle and Plato theorized about social and political perfect societies within a spatial order, it is the ideal city as proposed by Filarete during the Renaissance that showcases the idealization of a perfect society through a city model, an attitude reminiscent of the fanaticism of the Greek and Roman doctrine of city forms. With his plans for the fictive, ideal city Sforzinda, Filarete introduces the radial, concentric, walled city. The city model was comprised of two overlaid, identical squares, creating an eight-pointed star shape with equidistant corners. Each of the outer points would then be marked with a tower, while each of the inner points would mark an entry gate to this all-sided city. From these gates and towers, radial roads would converge through the city into the center of the town, merging in a large square. The entirety of the structure would then be inscribed within a perfect circular moat. As with many of the theorized works considering the 'ideal city', Sforzinda was intended to reflect upon the best social structures of humanity. The town plan revolved around a centralized figure, the prince, at the center of the towns societal organization. It is during this period that the intentions to organize built

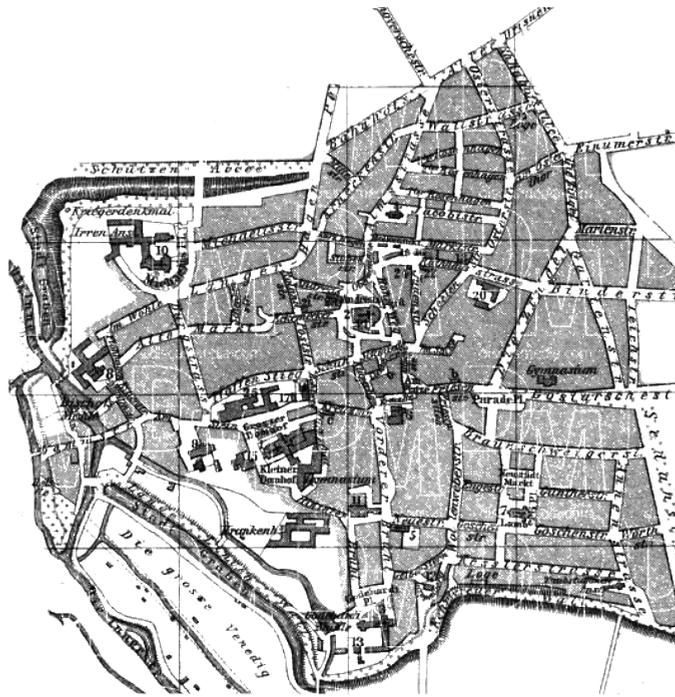


Figure 1.6: A Typical Multi-Nuclei city, deriving its character from various institutions; Hildesheim, Germany

space became once again an object of study and the roots were planted for the town-planner as a sole profession, no longer the by-product of philosophers, military officials or artists. An example of this is the treatise of Francesco di Giorgio, written shortly after Filarete. In his treatise, dedicated to the Duke of Urbino, di Giorgio attempts a survey of various urban forms and City Models. The trend of theorizing and idealizing of towns continued into the 18th century with the age of Enlightenment, with notable examples in works of Fra Giocondo in 1511, Caporali in 1536 and Palladio in 1556. After the Renaissance however, it seems that the application of new models or ideas regarding the urban scale had come to a halt.

NEW FORMS OF CITY PLANNING ON THE NEW CONTINENT AND URBAN PLANS OF THE 17TH - 19TH CENTURY

During the period from the end of the Renaissance leading up to the 18th century major new views regarding town planning might have emerged on the 'old continent', their application, according to Benevolo (1993), on the European continent was problematic from the very start. In essence, the urban system of the European city from the Renaissance was complete. This sense of completeness was derived from the establishment of the courts and administrative functions in

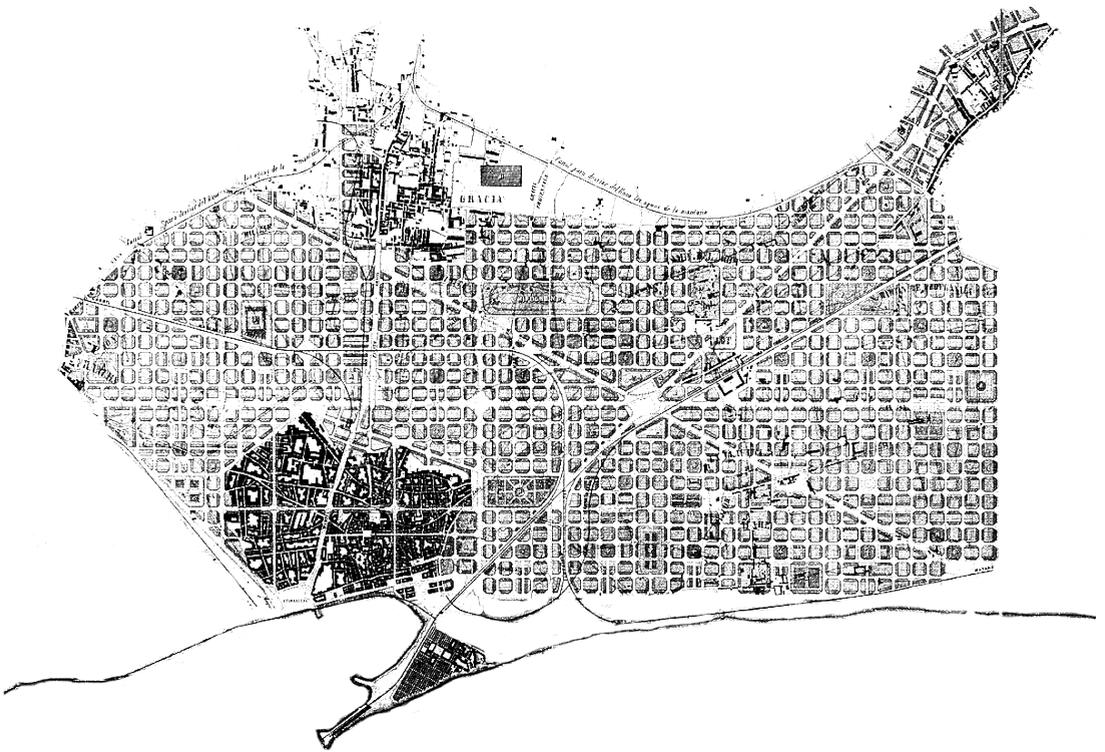
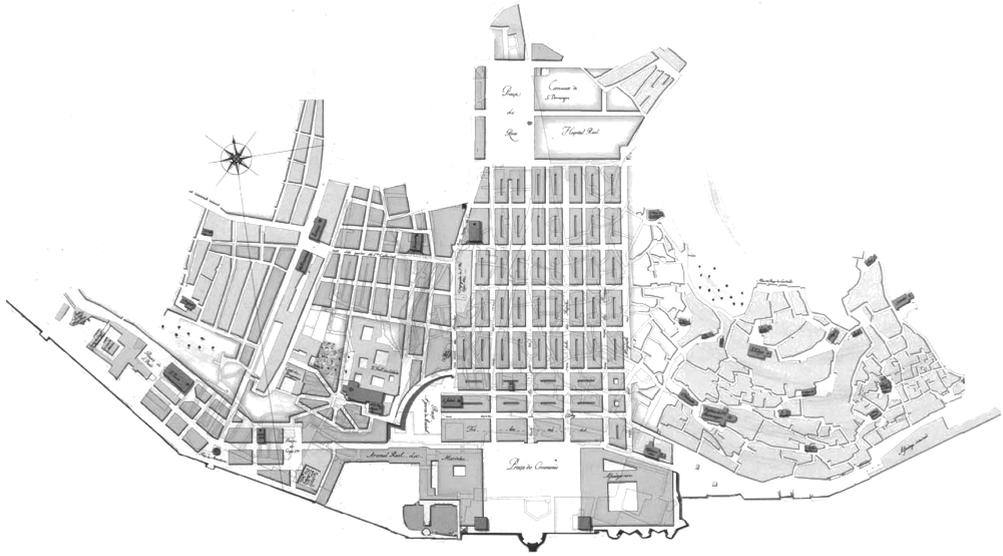


Figure 1.7: The Reintroduction of the Orthogonal model in mainland Europe; Maia's plan for Lisbon and Cerda's Plan Eixample

cities, constituting their role and indirectly their identity and appearance (Benevolo 1993).

It was thusly in the New World that they were put to paper, or drawn up in brickwork. It is then no wonder that one of the main city models introduced during the Enlightenment was thought up by British philanthropist and MP James Edward Oglethorpe in the 1730s. The multi-centered plan for the colonial town of Savannah, Georgia, had many roots in the redevelopment plans posed by various architects such as Evelyn and Wren for the redesign of London after the great fire of 1666 (Singh, 2016). The plans for London are an example of the numerous projects advocating symmetry and regularity in large cities across the European continent during the late 16th and beginning of the 17th century. The plan as drawn up by Oglethorpe is in basis an orthogonal plan divided into quarters, or Wards. Each ward comprising of an urban neighbourhood configured around a central square or farmgarden. Each ward consisted of a set of eight blocks, four wider blocks, called tything blocks, which were subdivided through lanes and four smaller blocks, called trust blocks. In the model, each of these wards was then outlined by wide, bounding streets, designed for uninterrupted movement of traffic throughout the city. Though organizing a city in separate quadrants was already present in the Roman ideal city, it is the merge of the ideas of a mult-centered town from the Middle Ages and the orthogonal grid town of the Roman that made the plans of Oglethorpe a new city model. With his European roots, Oglethorpe was not unfamiliar with the concept of multi-focal towns. With various towns on Europe's mainland being organized, or having grown, in line with this concept, such as Krakow, Rome and Hildesheim, Oglethorpe must have been familiar with the concept. In these European cities however, the quarters or wards derived from differing institutional nuclei (Pounds, 2005). With castles, monasteries, cathedrals or markets forming the center of these wards, each ward would have its own character and would functions to complement one another. In the old city of Hildesheim, prior to its demolition during the Second World War, the cathedral settlement (Domburg), the monastic settlement, the medieval settlement and the commercial new town could be distinguished as four separate wards with their own nuclei, complementary to one another and together forming the city. This multifocal development could be seen in Oglethorpes hometown London and its surrounding towns as well. Though initially designed for Savannah, Oglethorpe viewed the model as one applicable generally for all frontier cities in the New World.

Where the great fire of 1666 in London inspired new ideas for city

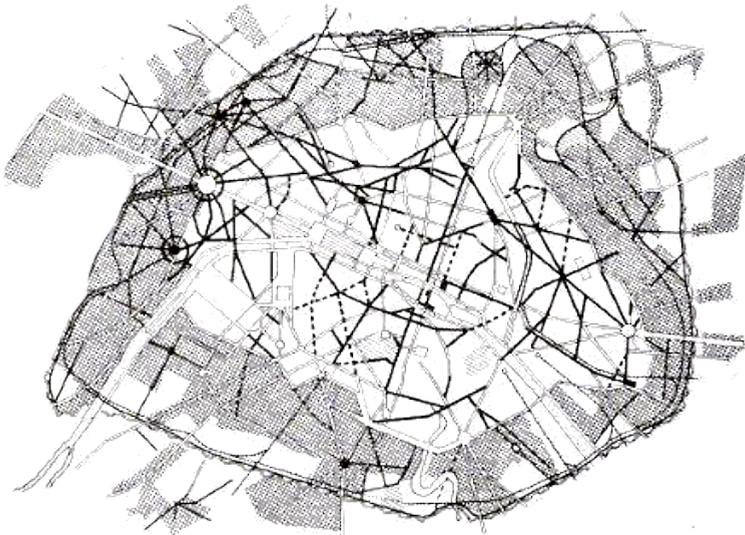
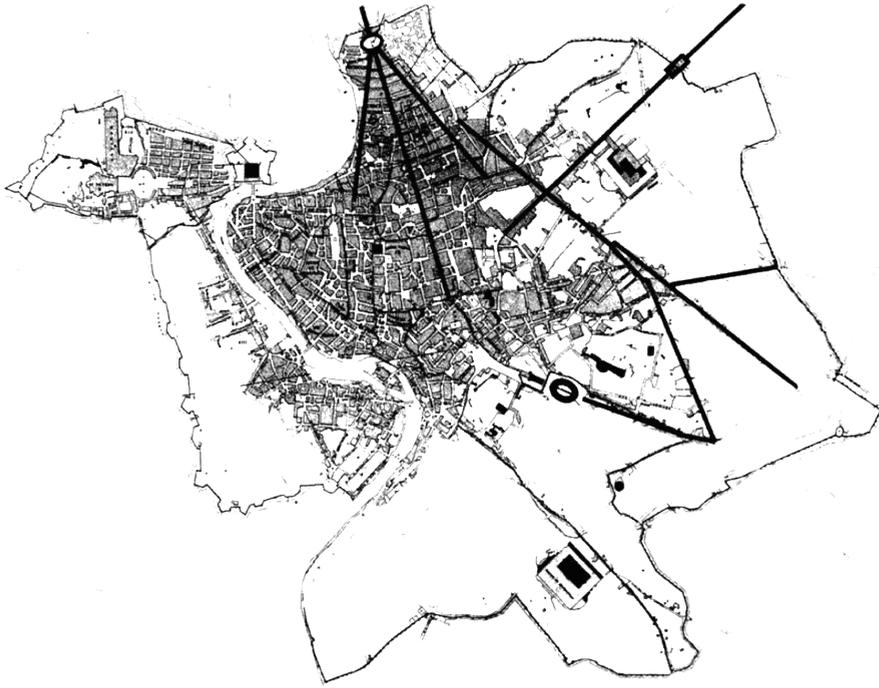


Figure 1.8: The Renewal of European Cities according to the Network-Model; Sixtus V's Rome and Haussmann's Paris

planning, it was the great earthquake on the first of November 1755 in Lisbon that allowed the transferal of the newly adopted town planning concepts of the New World to be brought back to Europe's mainland. One of the most deadly natural disasters and one of the most powerful earthquakes Europe had ever seen was followed up by three tsunamis and a ravaging fire that left little to nothing of the existing city. The design for the rebuilding of the city under engineer Manuel da Maia and the Marquis of Pombal took but a month and drew heavily from the notions of the new city models. This resulted in a redevelopment plan of Lisbon that consisted out of many large squares and rectilinear, large avenues and wide streets. Around a century later in 1856 in Spain, civil engineer Ildefons Cerdà drew up a similar style, grid-like extension plan for the city of Barcelona, his Plan Eixample. The model of the city was in theory an ever ongoing, infinite structure of closed, square buildingblocks. The plan was characterized by its long straight streets, the strict grid and the chamfered blocks. Within his plan, as the functioning of the Oglethorpe plan, each set of blocks functioned together with markets, schools and hospitals every so many blocks. As with the multi-focal towns in Medieval Europe, the plan of Cerdà would unite the old Medieval Barcelona with seven peripheral villages and would almost quadruple the size of the old town. With these plans and the study for them Ildefons Cerdà would lay the foundation as to what from then on would be called Urbanisme, a word and discipline that came into being with his publication of "*A General Theory of Urbanisation*" in 1867. Where the blocks of Da Maia and Oglethorpe were fully built, it was Cerdà that envisioned large buildingblocks with a green garden as centre, giving access to green for all social classes, forming a utopian city. At the same time of the all-sided, uniform growth plan of Cerdà for Barcelona, over in Paris a German born, French engineer by the name of Baron Haussmann lay his hands on the axial development of the city. As Haussmann viewed the city as a collage of dispersed fragments, he set out to connect these fragments through development of large axes within the city fabric. Where Haussmann did view the urban block as inheritance from the traditional city, the network was to be superimposed to tie the city together as a uniform whole (Panerai, 1977). In essence, Haussmann advocated for the city as a network that was filled in by building blocks. The vocabulary that Haussmann envisioned for the 'Network-City' was highly classical and reminiscent of the plans of Sixtus V for Rome or Christopher Wren for the reconstruction of London. Where the plan of Sixtus V connects ecclesiastical fragments of the city, Haussmann connected with his new network for Paris the modern hubs of the city and traffic nodes he deemed important for the city. A main difference between the plans of Sixtus V and Wren and the plan of Haussman is the approach. Where

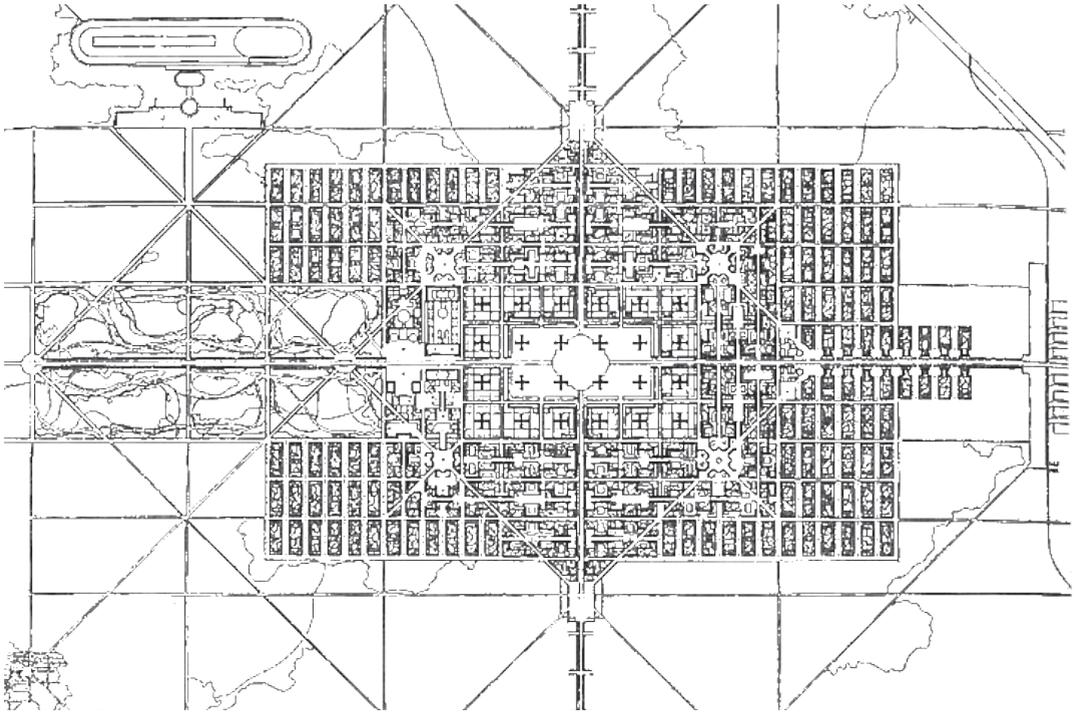


Figure 1.9: Modern Orthogonality; Le Corbusier's Ville Radieuse

the first two are created in a tabula rasa setting, Haussmann worked within the existing structured space (Panerai, 1977). The revision, as Panerai et al state, did not use the existing model of the city but, as if history had been interrupted, intended to install inside the city, regardless of existing tissues a new system. Haussmann in essence took away the existing city model of Paris and replaced it with, in his eyes, a more ideal city model, namely that of the network. In fact the way he implemented his views was in such a way that through his interventions, he hid away those aspects of the city that did not comply to his views of the ideal city. This ideal city, according to Haussmann, could be identified through its continuity and uninterruptedness. As the 19th century with its industrialization continued, the benefits that had led to the growth of cities such as Barcelona and London started to be outweighed by their disadvantages. Their quick growth, dictated by privatized enterprises created an urban environment in which the lowest social classes lived under such terrible conditions that it became a general public concern. Around the turn of the century this became of increasing importance for urban designers and theorists, spiking once again the rethinking of city models.

The 20th Century and renewed interest in the City Model

Under the idea that a healthier living environment was needed and that

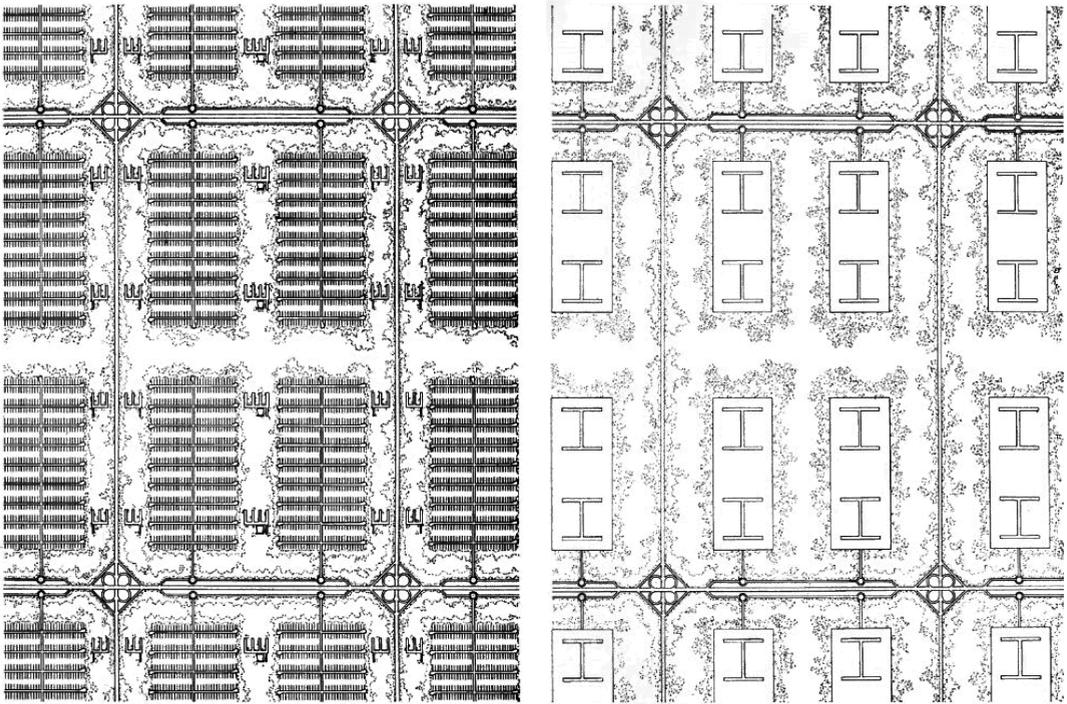


Figure 1.10: Modern Orthogonality; Hilbersheimers' Vertikalstadt

the current city models could not cater this, various new models, or variations of models were thought up by theorists. The main model to come out of this period is that of the satellite-town, or the Garden City. First appearing in the publication *"Tomorrow: A Peaceful Path to Real Reform"* by Ebenezer Howard in 1898, the Garden City was the go-to urban model of Europe in the first years of the 20th century. Its name derived from its location, within a belt of open countryside, the newly proposed satellite towns took the concentric development models of the Middle Ages to a new level. In his city model Howard envisioned towns that lay in proximity of the old industrialized cities, connected by railroad. Each of these towns was then to be comprised of a large central garden, encircled by the civic and cultural functions necessary to service the towns community. Around this would lay a ring of houses and gardens which was enclosed by a green avenue. A second ring of houses in a green setting was to be realized outside of this avenue with workshops and farms as a final outer ring. The entire town would then be encircled by a circular railway connecting the town with other garden cities and the industrialized city, catered by the inhabitants of the Garden Cities in its proximity. The introduction of the Town Planning Act of 1906 and the publishing of *"Town Planning in Practice"* by Unwin in 1909 resulted in an even further idolization of the Garden City Satellite Model in Britain, a work which, together with the works of Baumeister

and Stübben resulted in the re-appropriation and recognition of Urban Planning as a discipline (Benevolo 1993). Interrupted by World War One the movement had to wait until it gained full traction. However, as advocated by Ebenezer Howard himself, the Garden City of Welwyn with its easy access to London was deemed so innovative that it became a benchmark for post-war New Towns (Medina & Monclus, 2017). What became important in the plans of Unwin and later synonymous with the Garden City, was its “theme of the close”. Through this Unwin advocated the use of variations of the cul-de-sac, resulting in a network that was comprised of dead ends and would not see traffic going through neighbourhoods. With the relatively new model of the Satellite Garden City gaining traction in the interbellum, the 1920s and 1930s showed even greater interest in the rethinking of the model of the city and how the growth of existing cities or the founding of new cities needed to be taken care of. The interbellum formed the time period in which the ideas we now refer to as modernist began to surface. With names such as El Lissitzky, Cornelis van Eesteren and Le Corbusier, the new views regarding the ideal city envisioned in the interbellum took a radical turn. Specifically with the ideas of Le Corbusier with his *Ville Contemporaine* in 1922, a radical proposal for the industrial cities of Europe was made. The Modern movement brought with it a direct confrontation with past traditions, new views regarding the balance between public and private spheres and re-conception of the city’s Aristotelian role for realizing societal and human perfection. Modern city building took as its starting-point basic functional elements and built on these through the application of repeatable solutions (Benevolo 1993). This approach often led to the conceptualization of utopian models. In the *Ville Contemporaine* model for the ideal city as envisioned by Le Corbusier, three million inhabitants were envisioned. A uniform grid comprised out of an ensemble of sixty-story cruciform skyscrapers would be laid out, with, at the heart of the composition of large rectangular green space, a large transportation hub consisting of highway nodes, train and busstops and an airport. Le Corbusier envisioned a city that was made up completely out of state of the art ideas regarding housing and transportation. Around this configuration of skyscrapers, yet still within the uniform grid, low-story zig-zag apartment blocks would be situated. As with the skyscrapers, these would be situated far back from the street amid green spaces, allowing, in the eyes of Le Corbusier, the flow of natural space. With many variations of these visions such as the *Vertikalstadt* from 1925 by Ludwig Hilberseimer, the ideas of Le Corbusier and with that the International Congress of Modern Architecture (CIAM) had gotten foot on the ground regarding the new visions of the ideal city model (Medina & Monclus, 2017). The most striking formalization of these ideas can be found in the so-called Athens

Charter, as drawn up by CIAM in 1933. That the modernist movement, led by Le Corbusier saw their views of the ideal city model as an absolute truth could be seen in the radical Plan Voisin of Le Corbusier in 1925. In this plan Le Corbusier proposed the demolition of the entire centre of Paris, reducing it only to its monuments and replacing it with the structures he proposed in his Ville Contemporaine plan of the ideal city. With these plans Le Corbusier and the other modernists diametrically opposed the methods of other radical plans from the past such as the intervention of Haussmann in Paris. The basis of the modern approach to achieve the ideal city model was the Tabula Rasa principle, reminiscent of plans such as Cerdà and Sixtus V.

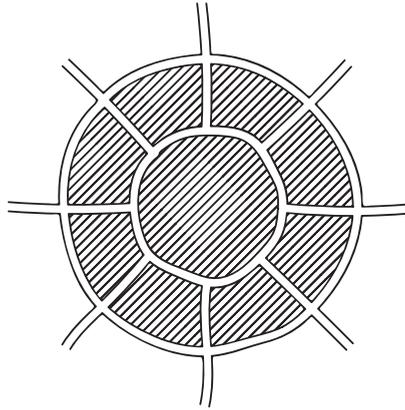
THE PARADOXICAL MODERN FISSURE

Whereas up until the interbellum the ideal city model had always seemed to be a variation of the existing city models or those thought up by predecessors, the modernist city model fully distanced itself from any ties to these past views. As Christopher Alexander stated in his work "Notes on the Synthesis of Form" in 1973, the designer in the past would stand to some extent upon the shoulders of his predecessors, resulting in some body of tradition helpful in designing. It is the rejection of these predecessors by these modernist designers that paved the way for these radical plans that bore little to no resemblance to previously envisioned city models. Modernism, as Colin Rowe states (1978), placed an immensely high premium upon the building as an 'interesting' and detached object. Its visions of the ideal city could be seen as the negation of the city and the last metamorphosis of the city model in a traditional sense. This negation is due to the lack of references to continuity of the city and the abolishment of spatial proximity, while at the same time, the differentiated status of spaces in functional terms disappeared (Panerai et al, 1977). The influence of CIAM and architects such as Le Corbusier was of such a level that all other types of city models were implicitly designated as irrational (ibid), a view which would last until well after the Second World War. The ideas and concepts as thought up in the interbellum gained a heroic status and were seen as an absolute truth after the war. Aside from the object in space notion that will be dealt with later in the next chapter, the notion of Euclidian (mono-functional) zoning gained traction after the war. This notion represents the functionalist way of thinking about the city that is tied to the modernist movement. Though many criticized the developments and loss of clear urban form in line with Kevin Lynch, Jane Jacobs, Aldo Rossi and Robert Venturi, for a long time, up until the 1970s, the modern vision of the ideal city remained a prevailing stigma. It is after this radicalization of Modernism after the war up until the

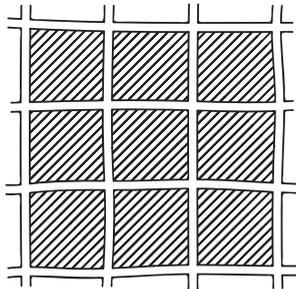
1970s that there seems to be no prevailing view regarding the model of the ideal contemporary city. As stated by Medina & Monclus (2017), the complexity of situations endured by European cities since the Second World War and the variety of urbanistic strategies demand the avoidance of generalization seen in the attitudes regarding the approach of city models since the 1980s. The value of 'urbanity', deemed lost during the modern period, regained attention. Ungers, Rowe and Rossi advocate from the 1970s on the conceptualization and introduction of 'Urban Form' and are based on the recovery of the culturalist view regarding the city and in particular the reconstruction of the European city (ibid). Regarding the recent development in the notion of the city model during the final decades of the 20th century and the beginning of the 21st century, the absoluteness of the model, as it had in previous periods, has fallen into dismay. As Ward (2013) states, the model –in this case may become simply a symbol deployed to reinforce a particular planning approach. In recent times, several 'model visions' have coexisted. One of these approaches regarding European cities and their present-day model is that of Peter Hall. In his 2014 work "Cities of Tomorrow" Hall pays attention to what he refers to as best practices and dictates criteria regarding the rediscovery of the 'forgotten art of urbanism' in European cities. In this work Hall stresses the importance of urban morphology as the basis for the city model of the future.

THE ARCHETYPES BEHIND THE CITY MODELS THROUGH THE AGES

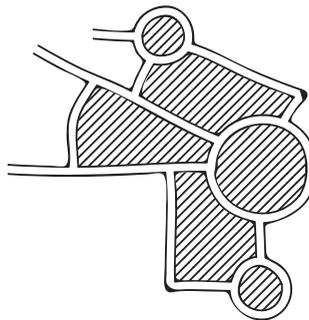
This brief journey through the history of the city model indicates that from a degree of absoluteness the city model has lost its status after the gradual decay of the Modernist movement, but return to them as a base for design and continuation of the city is called for by various theorists and architects. This basis lies then in the distinguishing of the archetype behind the existing city in order to elaborate and expand. As already described by Rossi (1966), the city tends to develop along previously set out lines and wishes to continue to develop along these lines, determining the root of this line is thusly the first step. Regarding all forms of city models or ideal cities that have been proposed for the renovation, expansion or founding of European cities, the root of these spatial configurations can be brought down to roughly three recurring dominant model-types, archetypes. These model-types are the Concentric model, with its roots in the Medieval city and idealization in Filaretes Sforzinda and Howards Garden City, the Grid model with its roots in the Mesopotamian city and idealization in the Plan Eixample by Illdelfons Cerdà, the Roman Castrum and Le Corbusier's Ville Contemporaine, and finally the Network or Multi-Nuclei model with its roots in the Medieval multi-focal towns and its idealization in the



radial concentric / circular*



grid / rectangular*



network / triangular*

Figure 1.11: The Three Archetypes of City Models

plans of Sixtus V for Rome, Haussmann for Paris and Wren for London. These models were already noted in the work of Sitte (1889), however analyzed at that time through fragments of the city, rather than the city as a whole as a model. In his work "The Art of Building Cities" Sitte distinguishes three types of 'model-application' in the making of streets and sequences of space throughout the city. As with the distinguishing of the models Concentric, Grid and Network, Sitte defines three models namely the Circular, the Rectangular and the Triangular. These can be mirrored to the division as made in this chapter; the Concentric as the Circular City Model, the Grid as the Rectangular City Model and the Network or Multi-Nuclei Model as the Triangular City Model. Each of these models have their own history and their own manifestation throughout history through various variations or, as Sitte refers to it, 'Bastards' of the combination of aspects of various models. Though the current age of Architecture and Urbanism might not propel a new 'ideal' city model to which cities have to behave or be shaped, the existing fabric of the European cities does showcase at least some form in which either one of the three dominant model-types can be experienced and which has manifested itself through the development of the city. In essence the image one constructs of a European city in some way has its basis in these model-types, whether this is because of their natural growth or radical interventions in their history of expansion, founding or restructuring. In a global context the three Urban Planning Models, or City Models, devised and put to use in Europe after the Middle Ages, the geometric grid, the concentric circle and the Multi-Nuclei network are found all over. A major development in the 20th century, as seen through this brief history of the evolution of City Models, is the compromise of the City Model after the radical breach with the traditional spatial relationship between buildings and open space and the change of functionality in the streets and streetpatterns of the European city (Klasander 2013). Though the model of the city has constituted itself long before the 20th century, its compromise through modern intervention can be seen in various instances. Colin Rowe (1978) distinguishes two attitudes regarding the City Model namely the Modern and the Traditional attitude, neither wishing to surrender to one another. Leonardo Benevolo (1993) notices this same distinction stating that the two methods of urbanization, those prior to and after the break with the 'ancienne régime', confront one another permanently. Rowe and Benevolo both suggest that abandoning either, or undoing either would be less than sane. hence the future work regarding the City Model would consequently be concerned with the reconciliation of the Modern and Traditional view.

THE IMPORTANCE OF URBAN FORM AND THE INTRODUCTION OF URBAN TISSUE AND MORPHOLOGY

As the previous chapter showcased, various time-periods and various movements in architecture and urbanism have had varying ideas considering the organization of the city and attitude towards urbanization and the implementation of City Models. For these ideal organizations of cities, whether it be for restructuring, renovating, expanding or founding cities, various City Models were conceived. Each of these various models could then be regarded as a city of the mind and a dictated or imagined way of life for its citizens. Though these models might differ in form, their origins might be far more similar than expected at first hand. As Rowe (1978) states, regardless of which causes one might choose to base their ideal society upon, fundamentally in the European tradition, one will be left with a combination of Plato and the Christian message and lines of spatial development, as stated by Rossi (1966) along which each European has developed and wants to continue to develop. Where Ward (2013) states that the city model in modern times is more often than not merely a vehicle for the communication of ideas rather than a model that needs to be strived for in regard of a complete and true realization, Rowe sees the city model as always having had this nature. The Model of the Ideal City, as Rowe states, is merely an icon of society and an instrument of education, a vehicle for the provision of information and an agent for maintenance and representation. The City Model was, in his eyes, an icon to be adored and up to a certain extent to be used, but rather as an image than as a literal blueprint for realization. It forms, as stated in the previous chapter, the point of departure when one aims to design to elaborate upon the existing city and continue the urban development of the city along the spatial lines that it has adhered to throughout its past development as advocated for in this literature analysis. Where the City Model, or the archetype of the City Model is the base for departure of this approach, it is far from the sole contributor. The approach defined in this analysis deals with the continuation of the European city as a product of the spatial relationship between its buildings, its spatial form, the street plans, skylines, and the interplay between the public and the private realm and their impacts on how we perceive the city (Krier, 2009). The aim is to offer a base for the spatial continuation of the city when developing. Three factors are of

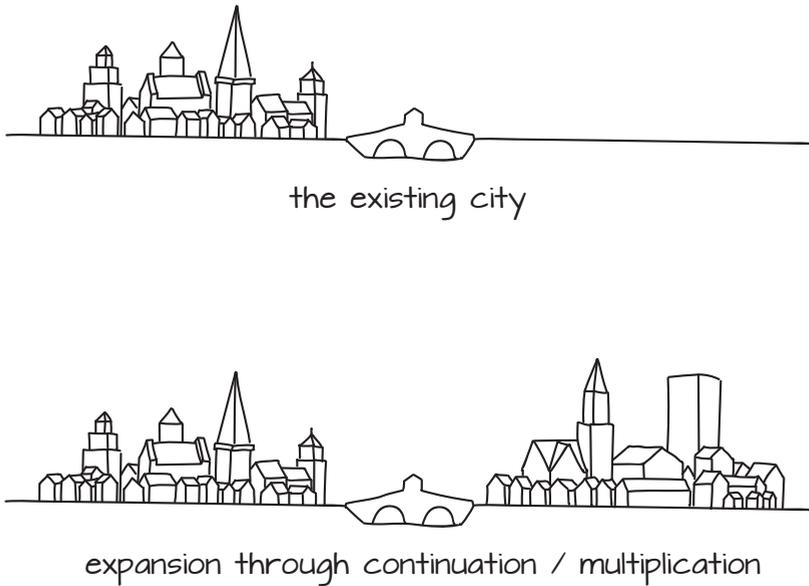


Figure 2.1: Designing for the city based on Continuation (Leon Krier, 2009)

great influence in determining this spatiality, namely Urban Form, Urban Tissue and the components of Morphology (Barke, 2018).

IMPORTANCE OF THE URBAN FORM

Before the importance of the Urban Form and the study of it is addressed it is key to define what is meant with Urban Form. As Rowe states in *"Collage City"* (1978), it is the idea of a utopia, of an ideal city that forms the foundation for the general idea or conventions of a time period. In that same paragraph Rowe highlights that these models are to be seen merely as guidance or core of idea rather than an exact blueprint for the creation of a city. Though many creators of these ideal cities such as Howard and Filarete might disagree, in essence, or as the course of history ran its way, Rowe (1978) and Hall (2015) seem to have observed the usage of the ideal city model correctly. Never has Sforzinda of Filarete or the Garden City of Howard been built exactly as it was envisioned nor have these plans been used as exact blueprints. They have however, formed the basis of executed plans and eventually formed the backbone of the spatial configurations of our cities. Howards ideas for the Garden City were taken on by Unwin and reshaped into executed design of the famous Garden Cities around London. When these configurations of buildings as projected by City Models are actually realized, the created ensemble is referred to as the 'Urban Form'. Though many interpretations can be given as

to what encompasses the urban form, most commonly it is observed as indicated by Meena (2014). He states that Urban Form refers to the physical layout and design of the city conferring a level of spatial arrangement of cities. Urban Form considers the spatial pattern of human activities at a certain point in time and can thusly be seen as a product of its time and the preceding history in which this spatial pattern has undergone evolvement in order to attain its observable form. It is thusly the spatial pattern or configuration of permanent physical objects within the city (Lynch 1981). If form can be deemed a configuration of elements, then the Urban Form is a result of bringing together these forms within the city as a whole and forming a pattern that is or has a recognizable concept in itself (Lozano 1990). The study of this Urban Form is in essence, according to Michael Barke (2018), concerned with the act of trying to make sense then of the physical world around us. Barke notes, as stated above that there is debate regarding the philosophical basis of these urban forms and argues that there is in essence to the study of the urban form a similar philosophical ground. In line with this lies then the observation of Conzen (1975) that the urban form in its essence is the 'objectivication' of the human spirit. Regarding the model of the ideal city as the basis for the urban form and considering the philosophical basis for the model of the ideal city, as stated by Rowe and Meena, the urban form must then be seen in essence as the human spirit or at least the ambitions of the human spirit and ideals. If this is then true then the continuation of the statement Conzen makes is of equal importance. He states that the urban form embodies the efforts and aspirations of residents in the past and the present. In this sense it is then the physical form of the city, its street layout, buildings and the usage of space that embodies or reflects the human spirit. As it is the reflection of ourselves it is then also related to how we see the city or relate to the city. In essence the urban form relates to the impact of the built form of the city on our senses, thus states Barke (2018).

Barke, Conzen and Rowe are not the only advocates of the importance of the Urban Form. Many other writers in the past have advocated for its active analysis and usage regarding the future development of cities, not only on the European continent, but across the globe through various authors such as Rossi (1966), Jacobs (1961) and Lynch (1960). Panerai (1977) dedicated an entire book to the evolution of the Urban Form. In its introduction he states that the issue of studying the urban form is aiming to capture the formal qualities of space, to raise interest in the physical dimension of the city and addressing the mysteries of the urban form. In addition to this and complementary to the observations made by Rowe, Panerai links the urban form and its impact

to the economic and cultural determinants that are involved with the production of the city and the life of the city's inhabitants. Through this observation Panerai wishes to confirm the legitimacy of the study of and the importance of the city models and, in his words, the 'work of the thinkers' which encompasses the idea of developing and transmitting architectural models. This notion is agreed upon by Meena (2014), who observes the interdependence and interaction between the urban form or city model and the social, political and economic forces that play a role within the city. Seeing the city model as a reflection of the human psyche as Conzen does, and the urban form as the interaction of societal forces as Meena does, it is clear that Panerai, iterating Henri Raymond, makes a clear case for the importance of the study of the Urban Form when he states that "the understanding of the urban form is as legitimate and effective a means of understanding a society as any other." (1977). Dear (1986) states this relationship of the city and its form and thusly the significance of the study of the urban form as the way in which the spatial form reflects and conditions social relations through time and space. Regarding all these observations, Urban Form as the product of a City Model is not a passive phenomenon, it impacts the day-to-day lives of the inhabitants of the city. Regarding the observation of the relationship of the Urban Form and the citizen or visitor of the city, Dear nor Panerai are the first to note this. Not even Rossi or Jacobs were the first observants of the impact of the Urban Form.

Where Camillo Sitte (1889) observes the impact of certain forms on the behavior of inhabitants and the usage of space within the city, it is Kevin Lynch with his work "*The Image of the City*" (1960) that perhaps firstly fully grasps the need of people capturing the form of the city in its entirety. Lynch in this sense was specifically concerned with the legibility of the city, or in this case the observability and possibility to experience the Urban Form of the city. In the book Lynch describes this as the possibility of the citizen to organize his city into a coherent pattern and whether the citizen is able to grasp an over-all pattern of districts or organization that makes up the city. A strong, recognizable Urban Form, according to Lynch is crucial in a city setting and is deemed by him to be essential when adding to or rebuilding a city. Lynch takes the observations of the Urban Form as a psychological influencer to an even further level stating that the image of the city is the product of both the immediate sensation and of the memory of past experience, used to interpret and guide the citizen. He emphasizes the crucial need of the recognition of the Urban Form and stresses the emotional importance of this for the individual. A clear Urban Form according to Lynch, leads to an environmental image that gives the citizen an important sense of

emotional security and heightens his potential depth and intensity of experience. It is the Urban Form that gives the city and the society that lives in it its meaning.

Barke (2018) continues on this notion stating that this is merely the 'practical' level at which the Urban Form operates. In line with Lozano (1974), he states that the Urban Form is at this practical level about the intelligibility of the townscape and is in its essence related to the possibility of creating a mental image of the city. A clearly pronounced Urban Form is one that eases the ability to form a mental map of the city. Where in the previous chapter it was indicated that Peter Hall noticed the decline of the City Model as a means of conveying an absolute truth in the end of the 20th and beginning of 21st century, he does stress the importance of the Urban Form (2008). The Urban Form possesses, according to Hall, a significance that transcends its current functionality, it outlasts the activities that take place (Hall, 2015). Understanding the Urban Form of the city and the elements it consists of, Barke (2018) states, is essential when aiming to improve conditions within the city. He continues stating that the understanding of the Urban Form provides the knowledge, understanding and methodology for the improvement of the city, in essence this is in his eyes the fundamental importance of the Urban Form as an object of study and the basis for designing as a continuation of the existing European city.

The previous chapter, "*The City Model as the Base for Departure*", showcased that after the 1970s and the downfall of the Modernist view in regards to urban design there has not been a new absolute truth presented in the form of a City Model. And as Rowe (1978) and Hall (2015) have noted it is the philosophy and thought behind the City Model as presented by the thinker that drives the designer to think about and design in regard of the Urban Form. It is the Urban Form that is the foundation of order within the city (Talen & Ellis 2002). Though there might not be an absolute normative theory regarding the design of good Urban Form as there was in the past, Talen & Ellis (2002) do state that aspects of the work of Jacobs, Lynch, Alexander and Krier combined form a partial basis for the creation and manifestation of good Urban Form and the aesthetics of spatial organization. This most definitely applies in order to continue along the lines of development that is associated with the development of the traditional European city. Continuing on this notion, perhaps there is not an absolute City Model today to advocate the creation, revival or regeneration of good Urban Form, but is it a library of knowledge as presented by the authors mentioned so far in this book, each addressing their own aspect of what used to be encompassed in the entirety of a City Model. Sittes

observations in *"The Art of Building Cities"* (1889) combined with Hegemanns *"American Vitruvius"* might address the artistic principles present in previous City Models, while *"The Death and Life of Great American Cities"* (1961) might address the aspect liveliness present in the City Model. Simultaneously Lynch's *"Good City Form"* (1981) and *"Image of the City"* might consider the very essence of the legibility of the Urban Form as advocated by the City Models of the past. According to Talen & Ellis (2002), it is then thusly key, in regard of the high importance of the Urban Form and its manifestation, to tie together the observations of these authors. In order to understand their observations and the components that make up the Urban Form of the city it is key to introduce two terms of vital understanding in the process of designing as a continuation of the existing city: Urban Tissue and Morphology.

INTRODUCING URBAN TISSUE

Throughout literature written about the urban form and the spaces that make up our cities the terms Urban Tissue and Urban Fabric are used. In the work *"Urban Forms"* (1977) by Panerai et al, the word 'Fabric' is only mentioned once in the introduction, the rest of the analysis sticks with the term 'Tissue'. Similarly Rowe in *"Collage City"* (1978) only uses the term fabric once to describe the composition of object and space within the city. Though used interchangeably in some works due to the fact that in essence, the two describe the same, namely the configuration of the space and object in the general composition of an area, large or small, speaking of Tissue rather than Fabric, however, might be deemed favourable in the analysis of the city and its Urban Form.

Michael Conzen (1975) stated that the physical form of the city embodies the human spirit of those living and residing within it, a notion that has been supported by various authors studying the shape of the city and its perception such as Rowe (1978), Meena (2014) and Barke (2018). Comparing the city to the human spirit, or even in a broader sense, to a living organism is not unique for these authors and their observations. Already in 1925 a basic notion comparable to that of Conzen was advocated for by Robert E. Park who stated that the city is in essence a state of the human mind and forms in that sense a body of customs, traditions, attitudes and human sentiment. The analogy between the city, its form and its aspects, and the human body is seen in various texts and figures of speech. Parks as 'green lungs' of a city, the centre as a 'beating heart' of the city and major routes as 'arteries', comparing the city to the human body is of all times. Each of these are part of an extensive vocabulary regarding urban planning,

created through the comparison of the city and its fragments to the human body or elements thereof. The comparison of the city to a living organism is a theme that has been explored through the history of the analysis of the city by various figures such as Plato, Vitruvius and even Le Corbusier. The human body and its state have served as a recurring metaphor to describe the complex functioning of cities throughout history, giving those advocating for radical change the allegories used to illustrate not only functioning but specifically malfunctioning of the city. Examples of these malfunctioning analogies are the statements "Paris is Sick" (Le Corbusier, 1929), and the comparison of a city's cross-section to the section of a fibrous tumor (Frank Lloyd Wright, 1958). In line with this falls the observation of Conzen stated earlier regarding the physical form of the city being an embodiment of the human spirit. Diagnosis of the city resulted for many in the offering of 'treatment' or drastic therapies. Especially in the 20th and 21st century where intervention within the urban composition of the European city varied from extremely broad and radical visible in proposed interventions such as the Plan Voisin for Paris by Le Corbusier to the small, local interventions that emerged from the 1980s onward after its introduction in the schemes for Barcelona's urban renewal, fittingly christened as 'urban acupuncture', by Bohigas and De Sola-Morales. The return of viewing the city as an organism rather than a machine or the mechanically rational as became popularized through the views of the Modern Movement, originating from the rationalized scientific viewpoints adopted during the Enlightenment of Europe, came through the failure of the latter as proper analogy (Rowe 1978). That this change of notion finds its roots in the hands of a schooled biologist around the turn of the 19th century is then no surprise. It is in 1909 that Patrick Geddes introduces his concept of the Valley Section, and at the same time refers to the alteration made in the composition that forms the city as "surgical" interventions (Mumford 1947). The built environment, according to Geddes, was an expression of the human endeavor and our sensibilities. Gaining traction throughout the 20th century the notion of observing the city as an organism, re-introduced by Geddes, grew to be one of the prevailing ideas (Lynch 1984). These views and the imagery and analogies regarding the organism are reflected in the perspectives of contemporary urban morphologists (Barke 2018). Lynch adds to Geddes that, if the city were to be viewed as an organism, that certain characteristics are key to set it apart from the notion of the city as a machine or inanimate object. In "*Good City Form*" (1981), Lynch defines the organism, and thusly the city, as one that is autonomous with a definite boundary and denounces the notion of simply adding limitless parts. He advocates the restructuring of the Urban Form, as organisms do when they grow, the reorganization of form as it changes size. The

only contradiction in the analogy of the city and the organism, regarding Lynch is its process of the life of a city. Where, like an organism, a city is born and grows both reach a state of maturity, it does not and should not reach a point of termination. The organism when brought into life, will be faced with a point of death, Lynch advocates that it is the city, contrary to the natural organism, that should not die. The combination of Geddes and Lynch then, supports the notion introduced in this chapter through the words of Michael Conzen that the built form represents the objectivation of the human spirit.

Staying within the realm of Lynch regarding analysis, it is then the city that is an organism and that its physical manifestation is comprised out of its spatial configuration. This would then mean that this spatial configuration of the city is then of organic origins as well. Constituting and supporting the totality of the organism, or the 'form', in line with observations in the past, this can be of functional or dysfunctional nature. If the notion of Lynch's 'good' form is translated into an organic term, one could speak of a 'healthy' form or 'unhealthy' form. In this case then there is the spatial configuration of object and void that constitutes this form, it can be seen not as a fabric but as a tissue. This tissue, as with organic tissue, is subjected to growth, to change, to alteration and most of all susceptible to damage. The role of tissue is then a vital part of the constitution of the Urban Form and the perception of, or rather the appearance of the city to those attending and residing in it.

Where Lynch stresses the importance of landmarks in the understanding of the city form and the orientation within that city form, even attributing a sense of belonging to it, these spatial occurrences are more often than not qualifiable as the spectacular or the exceptional within the whole composition that is constructed in the Urban Form. They are the architectural and spatial works that are considered by Aldo Rossi (1966) as the *Primary Elements* or the *Res Publica* by Leon Krier (2009). Though these elements certainly aide the construction of a mental image of the city and aide the constitution of the Urban Form and even in their nature as a *quartermaster* (Gramsbergen, 2014) aide de development of the city, it is its collaboration with perhaps more the relatively mundane, or the ensemble of the 'everyday', that forms a much larger contribution to the perception of the Urban Form (Barke 2018). This notion of these exceptional buildings shall be dealt with later on in this research and approach, what is at hand now is the general mass and configurations of the city, or the *Res Economica*, as defined by Leon Krier (2009). It is these sets of structures and spatial configurations that constitute the built form of the city, they form the trace of the plan

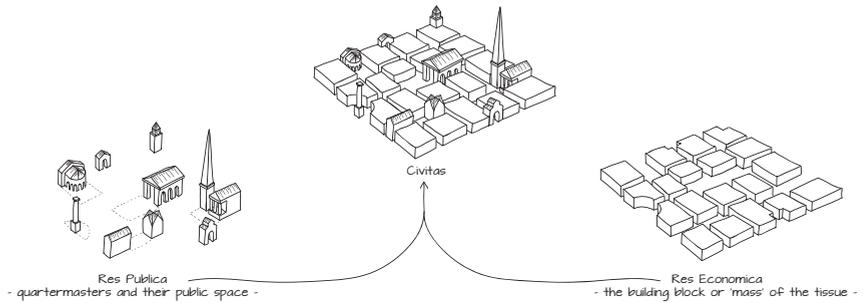


Figure 2.2: The Two components that make the city; Res Economica and Res Publica (Adaption of drawing by Leon Krier (2009)).

of the city, and seemingly constitute the conscious and unconscious rules that ties a certain spatial configuration to a specific city (Rossi, 1966). It is this relatively mundane that for a large part is responsible for the totality of the city as a built form. It is this understanding of these characteristics that forms the second layer of analysis and approach for designing in a continuing matter for the existing city, they are determined through their morphological characteristics.

These characteristics can perhaps be illustrated by characteristics belonging to what Lynch refers to as 'Districts' in his *"Image of the City"* (1960). Districts, in Lynch's theory, consider areas of homogeneity. The more distinct characteristics a region has, the stronger the impression of a unified region is. Rowe in *"Collage City"* (1978), regards one of the major contributing characteristics that of the spatial relationship of the object versus the space, or more considerably the ratio Ground-Figure. The observation of the importance of the Ground-Figure, or as defined previously, the Urban Tissue, is substantiated in various works such as *"A Pattern Language"* (Alexander 1977), *"The Architecture of the City"* (Rossi 1968), and *"The Image of the City"* (Lynch 1960). The core of our perception of the city and its form and character lies in the physical substance of that city, of which we primarily experience the ground and the delimitation thereof by the built form (Kropf 1996). Though models and forms might be a result and product of an intangible process of decisions and ideas, the city is first and foremost a physical entity and is thusly perceived primarily as such. Physicality however does not form a useful framework to describe the character of a city unless it is more explicitly defined (ibid). The more explicit definition of physicality comes in the form of Urban Tissue. This then can be seen in various degrees of 'resolution', from the lowest resolution in the form of streets and plot series, through medium resolution with plots and streets and the higher resolution of buildings and streets (Kropf 1993), or more generally the built and unbuilt ratio, defined by Rowe as the ground-figure ratio. An

even higher resolution of the Urban Tissue can be seen in the approach of Nolli when distinguishing internal publicly accessible space within the built form as well. Tissues in themselves can be recognized and identified as types, being areas with similar arrangement of elements and ratio of ground figure (Kropf 1996), in line with the notion that Lynch attributes to 'districts'. The Urban Tissue is in the end a result of the historical development and refers to the time and ideas around the development of the city. The Urban Form can be seen as being written in or perhaps even written by the Urban Tissue (ibid). This observation might suggest that the study of Urban Tissue, Morphology, aims to merely identify tissue in terms of historiographical appropriation. In the notion however of the city as a living organism, Barke (2018), states that the study of the Urban Tissue is an essential platform, analogous to the study of the anatomy for surgeons. Morphology, according to Barke, is like the study of anatomy in the way that it is of essence to understand and comprehend before laying hands on the body to heal or improve it.

DEFINING MORPHOLOGY

It was Jane Jacobs in her 1961 work *"The Death and Life of Great American Cities"* that, without naming so, advocated the importance of Morphology. In it she states that the nature of streets and buildings and their physical arrangement, thusly Morphology, promotes a safe, social and economic sustainable environment. At a practical level the importance of Morphology lies in the theories of authors such as Conzen and Lynch, who are concerned with and convinced of the necessity of legibility of the city. It is Morphology that relates to the intelligibility, navigability and understanding of the city and the ability to form a mental map (Lozano 1974). The all-encompassing Urban Form through the richness of the Urban Tissue and a clear Morphology can be brought down to be interpreted and perceived on the human scale within an urban area. A feature stressed with great importance by figures such as Jane Jacobs (1961). It is this legibility combined with the uniqueness of the cultural aspect of Morphology that shapes the identity of the city. When seen once again as the physical manifestation of the human psyche, it is then Morphology that embodies the human character and the identity that is attributed to the city by its residents and visitors.

It is Morphology that is occupied with the sense-making of the world around us (Barke 2018), it gains its importance through its grounding in what is present in the visual built environment. Though this might be deemed then only of a descriptive nature, it is the structuring of the

morphological analysis that has the capability to uncover the Urban Form and the character of the Urban Tissue. Additionally to this, Dear (1986) stresses the importance of morphological analysis and the significance of the Urban Tissue regarding the way in which it conditions social relations and behavior over time and space. This notion is underpinned by the observations made by Klasander (2013). She stresses that the spatial relationship between buildings and open space make Urban Morphology a key point of analysis, regarding the Urban Tissue as a major factor in city improvement. Her study puts forward that alterations in the Urban Tissue are of greater impact than any alterations made in programme. As she states, it is functional change that has little to no effect in regards of the usage of space and the movements occurring within that space. Adding to this that if a change in movement economy within a city or district is wanted, a change in the Urban Tissue is necessary.

Another important aspect of Morphology is culture (Barke 2018). It is the Urban Form and the Urban Tissue that reflects the local interpretation of what is required of the physical manifestation of the city to carry out the various functions attributed to human societies. It is in this interpretation that culture is expressed. Though the basic needs are similar all across the globe, it is this physical manifestation, or the Morphology, that differs. It is Morphology that classifies and frames the environment we live in. It promotes the cityscape from being nothing more than 'random noise' (ibid). The cultural dimension of urban Morphology is exactly what lies at the base of this promotion. It brings tools and mechanisms that frame the perception and appreciation of the city. As seen in the analysis of the components of Morphology by Trancik (1986), which will be discussed later in this chapter, it is the groupings of buildings, the ratio Ground-Figure and the relations to one another and adjacent spaces that manifest this cultural appropriation of the city and the identifying of the city as a pleasant, or readable and understandable entity.

Culture also brings forth the way Morphology is approached. Kropf (1996) distinguishes two approaches to the study of Morphology namely the Italian and the Anglo-German. This latter sees the urban landscape consisting of the Urban Form, the Urban Tissue and the organization of space. The Italian school however the starting point of Morphology is the individual building and the distinguishable typology of these single cells that make up the Urban Tissue. Here we are more concerned with the Anglo-German approach that is rooted in geographical sciences and the North-western European Medieval Urban Forms regarding the observation and analysis of the city. A note

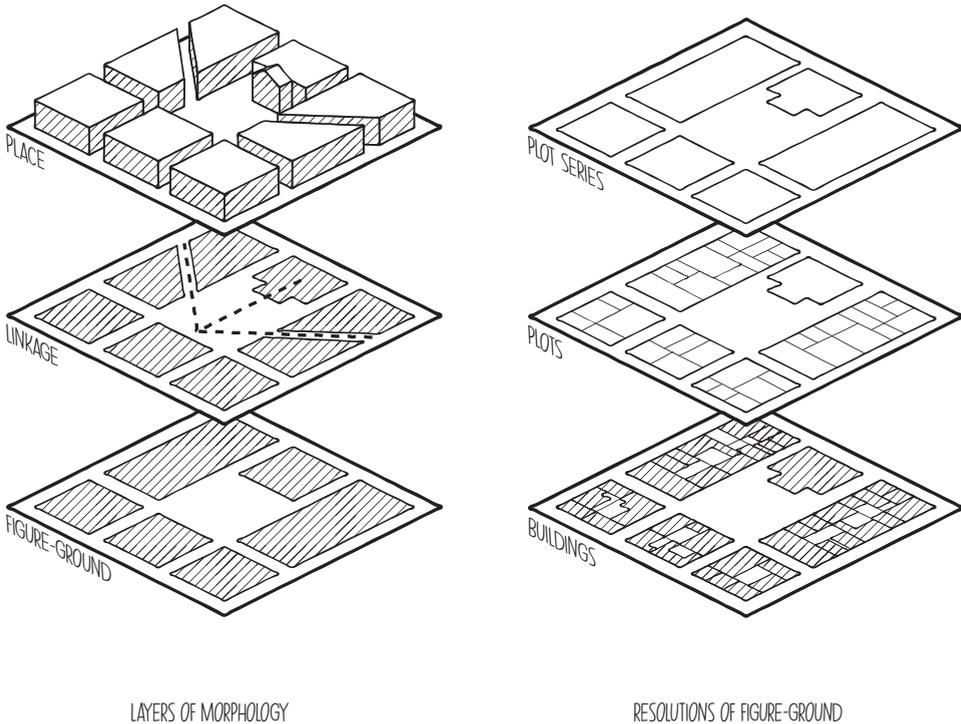
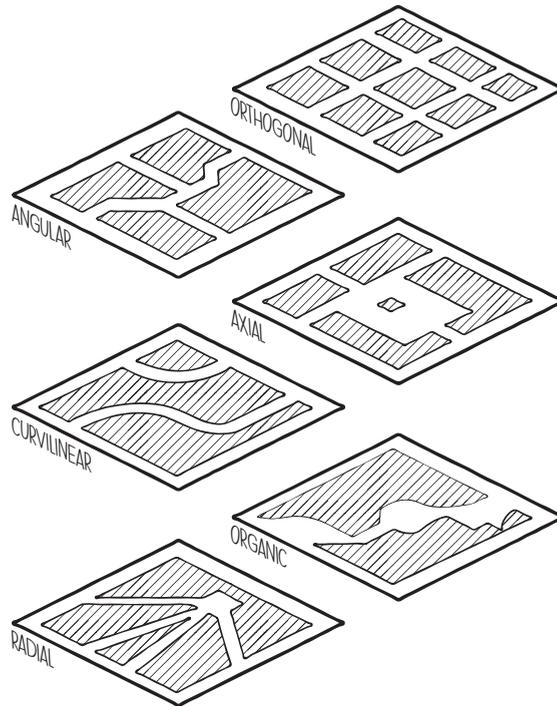


Figure 2.2: Trancik's Layers of Morphology, and Kropfs Resolutions of Figure-Ground

that this approach makes regarding the Italian approach is that not every single cell (building), might have value on its own. Its occurrence in groups however might serve a particular architectural and urban function within the Urban Tissue and thusly do have an architectural distinction. In line with the observations made by Klasander (2013) and Dear (1986), Peter Hall (2008) stresses the importance of the Anglo-German approach of Morphology. He points out that it is the physical manifestation of built and unbuilt, Urban Tissue, and on a much larger scale Urban Form outlasts the type of use given at a specific point in time, thusly rendering the approach of the Italian school regarding Morphology of lesser importance or substance than that of the Anglo-German school. As Klasander (2013) stated, it is the Morphological form and alterations to the Urban Form and Tissue that are of a much greater importance than the alteration in program. A closer and more explicit integration of planning goals with Morphology is thusly advocated for by Hall and other apostles of the Anglo-German school of Morphology. In their eyes the incorporation of various Morphological principles based on the threefold approach as defined by Roger Trancik (1986), produces



TYPES OF FIGURE-GROUND CONFIGURATIONS

Figure 2.3: Types of Figure-Ground Configurations, as defined by Kropf

a much more sustainable urban environment, even in areas that are not particularly noted for their architectural and urban distinctiveness (Barke 2018). It is the theory of Trancik regarding the study Morphology that will be closer examined.

Morphology, as defined by Roger Trancik in his work *“Finding Lost Space”* (1986) is comprised out of three approaches to the studying of the Urban Tissue, namely that of the Figure-Ground theory, the Linkage theory and the Place theory. These three together form the aspects that combined result in Morphology, or the study of the Urban Form. The Figure-Ground theory regards the relative land coverage, dealing with the balance between the built and the unbuilt space. The Linkage theory bases itself on lines formed by streets, viewpoints, sequences of spaces or other linking elements that physically connect parts and areas within the city. A layer on top of this is the Place theory. This theory adds the components of human needs and the cultural and historical context. Together they form the aspects of Morphology. An important aspect of Morphology, especially on the Figure-Ground level, is that of Urban

Poché. Where in architecture poché discusses the solids of the architecture regarding the walls and columns, or so to say everything that is depicted as solid black in drawings, it is in Morphology that poché discusses the supportive structure of the space in the city. It is about the relationship that the figure forms with the ground, how the solid relates to the void and the object to space. This can be seen in light with the observations of Kropf (1996) regarding the 'resolution' of the Urban Form that has been discussed earlier. It is the concept of poché that dictates a certain level of impossibility to create a solid, enjoyable and understandable spatial structure through the mere use of vertically oriented elements. As Trancik states; when the Urban Form is predominantly vertical instead of horizontal, specifically mentioning the point-block tower and slab structure of Modernism, it is next to impossible to shape coherent urban space and thus a good morphology. The concept of poché is one that is also present in Alvar Aalto's defining of the problem of spatial design. He states that the problem of spatial design is one that regards the connection of the form of the building to the structure of the site to create positive exterior space (Trancik 1986). This connection, or the pattern of solid and void can roughly be subdivided into six categories. These are defined by Trancik as the orthogonal, the radial, the axial, the angular, the curvilinear and the organic. These different patterns are most commonly combined into the general ensemble that defines districts and even at a larger scale the entire Urban Form. The major type of urban solid in the city is the urban block. Krier states that it is the size, pattern and orientation of the urban block that makes the urban block the most defining element regarding the creation of public space. Within the tissue created by the pattern of solid and void are special occurrences or moments that together form lines and connections within and to parts of the city. Trancik defines this as the spatial datum of the city. Datum in this case refers to a line of force to which the play of solid and void is denoted, in a similar fashion as the play of notes on a piece of sheet music is denoted on the musical staff. Often it is the larger scale datum of the city that is denoted or experienced as the City Model behind that lies or has lied behind the creation of Urban Form. In "*Investigation in Collective Form*" (1964) Fumihiko Maki defines the aspect of linkage in Morphology as the glue of the city. He states that the linkage theory is that what makes observers unite all the observable layers of the city and helps them create the mental image of the physical form of the city. Regarding Trancik and Maki it is thusly key to create a set of comprehensible links that sets the background to which the interplay of solid and void can unfold itself. Linkage is created through the careful creation of pattern in the Urban Tissue and the freestanding objects, the primary elements, the Res Publica within this Tissue, it is the controlling idea that orders

buildings and space within the design of the city. The third and final layer that Trancik defines, the place theory, has its roots in the understanding of the cultural and human characteristics of the physical space that is created by the interplay of solid and void set to the backdrop of the city's datum. As stated before culture is an important aspect regarding morphology. It is by reason that so far there has been reference to solid and void, to object and space and not to place. Space becomes a place when it gets a contextual meaning that comes from cultural or regional content (Trancik 1986). This character is shaped through the tangible, that what has been discussed so far and will be dealt further with when discussing the component of Res Publica, but also from the intangible, cultural associations. It is the distinct character of the space that makes it a place, or as Norberg Schulz states in "*Genius Loci*" (1979), it is the spirit of place (Genius Loci) that is what man has to face and that shapes his daily life through meaningful places that help him dwell. Where Trancik interprets this Genius Loci as the interplay of local history, traditions of craftsmanship and the political identity of the community, Herman Hertzberger states that finding the Genius Loci is about finding out what the object at discussion wants to be, once found out the form makes itself. Each of these, in line with Lynch's work "*Image of the City*" (1960) presuppose that Urban Form, Urban Tissue, and sense of Place are not scholarly terms understood and experienced merely by the educated. The legibility, structure and identity of the city are experienced by every one that resides in the city (Lynch 1960, Trancik 1986). People experience the spaces of the city and it is this experience that needs to be designed for according to Lynch. Through the careful design of a good Morphology these needs are catered (Trancik 1986). The contextual space then, created by and seen through the concept of Morphology, is one that is based on readability and associations in a layered blend. Obsessing only with one of the three aspects of Morphology, albeit Figure-Ground, Linkage or Place, would be of an inadequate approach regarding city forming (Ibid.). Designing only according to the linkage aspect of Morphology would result in a city that is not designed around the spatiality, leading to a city that is hard to understand and experience. If only the place aspect of Morphology is taken in account the links between various places, their interconnection might be lost. If the figure-ground aspect is solely given attention a proper balance of spaces might be created, but they would be of meaningless character and their mutual relationship be unobservable or non-experiential. It is thusly key to regard all three aspects of Morphology when one is concerned with the ambition of good city forming. This is especially true for the European city with its rich backstory and its physical constellation. It is these European cities and their configuration and Urban Form that call for the need of a

responsible and active appreciation of its spatial setting (Benevolo 1993). A key aspect of this is then the understanding and regarding of the Morphology of a European city, for all in all it is about the experience, readability and understanding of the Form and Tissue that shape the identity of the city and those who reside in it, the aim of good urban design is to shape a city that is recognizable and a humanly understandable entity (Maki 1964). Proper understanding of the existing city and the conscious and unconscious rules that shape the Figure-Ground, that are present in the Linkage and are associated with the Place-making within the city in order to elaborate upon it and continue along the set out lines of the development of the Urban Form is thusly essential and forms through examination of the Res Economica of the city the second layer of analysis in this approach.

FIGURE-GROUND AND THE SEEMINGLY MODERN-TRADITIONAL DISCREPANCY

In the first chapter of this book, *“The City Model as a Base for Departure”*, it is concluded that, regardless of the type of City Model or the evolution of the City Model, two attitudes towards the City Model can be distinguished. This distinction or division is addressed both by Colin Rowe in his work *“Collage City”* (1978) and by Leonardo Benevolo in his 1993 work *“The European City”*. Christopher Alexander in his work *“Notes on the Synthesis of Form”* (1973), makes a similar division where he speaks of a past and a present. This past, in his eyes, is a time where the designer of space stood upon the shoulders of his predecessor. The present, according to Alexander, is dictated by the formmaker who has torn away the last shreds of tradition from himself. Benevolo and Rowe, align with this and distinguish a past and a present, stating that the Modern formmaker is one that operates after a break with the ‘ancienne régime’. That there is a distinction between a Modern and Traditional attitude can almost be seen as a given, something that even the untrained eye would agree with. The question whether there has been break in tradition or line of evolution within form- and citymaking requires then no discussion. What does lend itself for discussion is when and why this breakage occurred and what this breakage actually means for the Urban Form of the European city. Though one might argue that it is perhaps not of vital importance to define the origins, perhaps even the entire period of development of Modernism, it is key to understand the impact and place it into a context that is much broader than just the current status that can visually be observed. The previous two chapters have namely addressed that the core of this approach lies at the continuation of the Urban Form and the morphology of the European city that it is attributed to it through the ages. This process of continuation perhaps might be classified as a system that builds forth upon the past, it does not mean that it is of nature that wholly and diametrically opposes the viewpoints and executed plans of the Modern period. So far the first two chapters have addressed the approach of continuation of the Urban Form as one that can be applied to expanding the city, however the approach based on Form, Tissue and Morphology is applicable to redevelopment of quarters in the city as well. In fact, as stated in the research of Klasander (2013), it is often these areas in the city that this approach will be of hand in resettling them within

the Urban Form of the city. Approaching these areas on an analytical base, rooted in the approach toward Morphology and Figure-Ground as defined by Trancik and Kropf as showcased in the previous chapter, shows that even in those areas of the city that seem most distant to what is seen as traditional European Urban Tissue, characteristics can be found that can form a base for the Morphological development necessary to draw these areas closer within the Urban Form of the city. This chapter showcases that certain aspects these values perhaps associated with 'Traditional Urbanism' (Krier, 2009, Lynch 1981) can be found in the Modern Urban Tissues that have developed throughout the twentieth century as well and can form a base of development when redeveloping these quarters of a city in light of the approach of Urban Development through continuation. Additionally it is essential to define and make clear that what is discussed in this chapter are the views and designs that are attributed to the Modern philosophy and practice of formmaking. What is discussed here are all things Modern, not contemporary, though neither are fully mutually exclusive in regard to thought, form or argumentation. A contemporary work can display the modern philosophy or modern form, and thusly the modern form or philosophy can be present in contemporary works. We are concerned here however, mainly, with the works, philosophy and impact of what is referred to in literature and by historians as Modern and are seemingly most opposed to those spatial and formal configurations most closely associated with the European Urban Forms. Similar to the approach in the first chapter of this book, the various incarnations of the visions in the Modern period will be briefly examined in this chapter, from origin to its heydays.

THE ORIGIN OF MODERNISM

As stated in the introduction of this chapter, it is key to define that what is examined here is Modernism as a philosophical and formmaking movement, not just any works in recent history. The nature of Modernism and the emergence of Modern Urbanism and Architecture has been the subject of interpretation throughout historiographic research. Its very essence is even subject of debate, some see it as a period, some as a style, others a combination of the above, often depending on the discipline that is examined (Childs, 2000). These various viewpoints regarding the nature of Modernism make it undesirable to speak of single form in which Modernism has manifested itself through various disciplines, from art to literature and from Architecture to philosophy. The sheer difficulty of unifying these various observations showcases the complexity of the discipline with perhaps an

Benevolo, that triggered its birth is however debated. Monclus, in his work *"Urban Visions"* (2017), states that, in respect of national tradition and different rates of economic and urban growth at that time, in some European countries it was the heavy industrialization of the city itself that triggered the Modern philosophy in Architecture and Urbanism, while in others it was the need to regulate the growth of the city due to new developments in transport and housing. If the combination of these two, present in all countries on the European continent to a greater or lesser extent, is regarded as the catalyst of the Modern thought, it can be stated that the turning point, or 'breaking point', occurs during the early decades of the 20th century. It is namely at this time that the first international conferences regarding the 'new' attitude towards Architecture and Urban Planning are held and the term 'Modernism' is coined (Monclus 2017). This is a similar read to Modernism as author Charles Jencks has in his work *"Modern Movements in Architecture"* (1973). In this work Jencks examines the various characters present throughout the period that he regards can be deemed 'Modernist period'. For the author, famous from its evolutionary tree diagrams regarding the development of architecture, it is the 1920s that showcase the birth of what later would be referred to as Modernism in Architecture and Urbanism. It is that same Jencks that declared the death of Modernism on July 15th, 1972. What is left then to explore and examine, taking the starting and end point of Modernism in regard of Monclus and Jencks, is a period roughly lasting from the 1920s to the 1970s. During the course of this period, as the evolutionary tree of Jencks depicts, an evolution of the "Modern thought" can be seen in the various works realized, from the very first conceptualization of the Modern thought in the interbellum to the orthodox Modernism prevailing in the 1960s and 1970s. In regard with the observations of Childs, Tournikiotis and Frampton, there is a multitude of interpretations of the Modern philosophy during these 50 odd years visible, both in realized projects and in theoretical plans made. That there is a Traditional and a Modern attitude towards the Urban Form and the Urban Tissue, as Rowe, Christopher and Benevolo do, is a viewpoint that is widely accepted, the discrepancy however between the Modern and the Traditional can be seen as a variety of breakage with the traditional Urban Form and Tissue, or even as an evolution of breaking with the traditional as exemplified in *"Urban Forms"* by Panerai (1977).

The development of the Modern view and its many iterations is divided in a set of three rough periods for the analysis of the its various characteristics. The first of the three is the 'Conceptualization' of the Modern thought and philosophy that occurred mainly in the interbellum and is represented through the works of Ernst May in Frankfurt. The

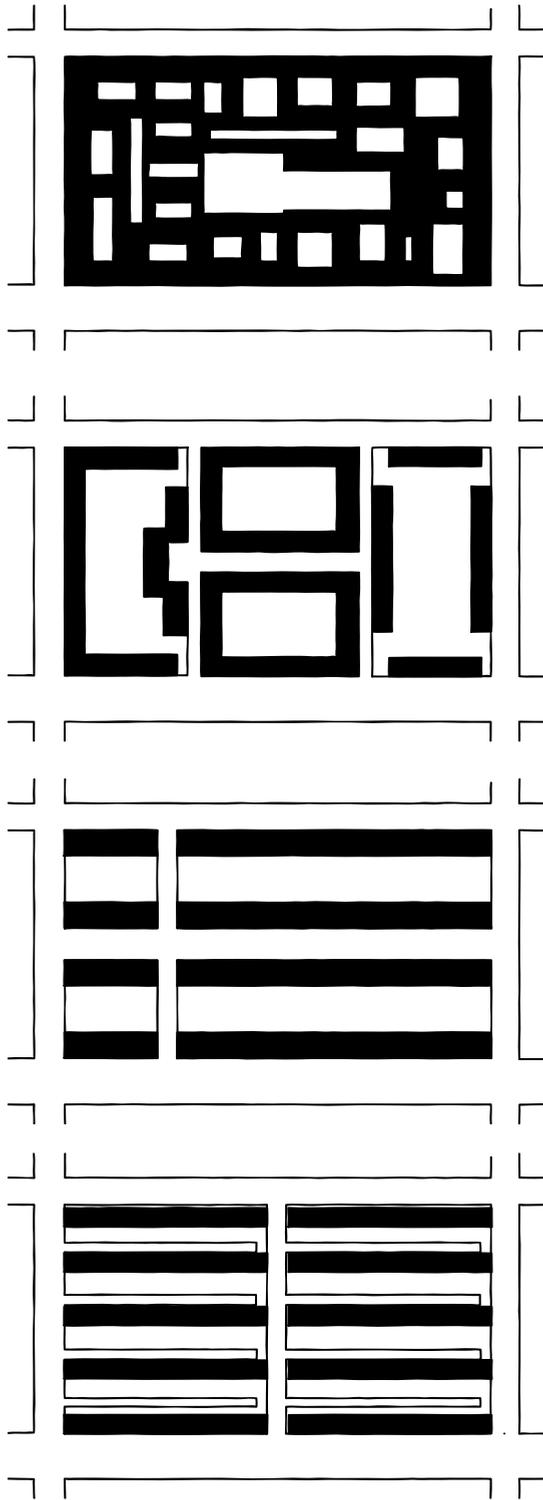


Figure 3.2: Variations on the Building Block, as introduced by Ernst May in "Das Neue Frankfurt"

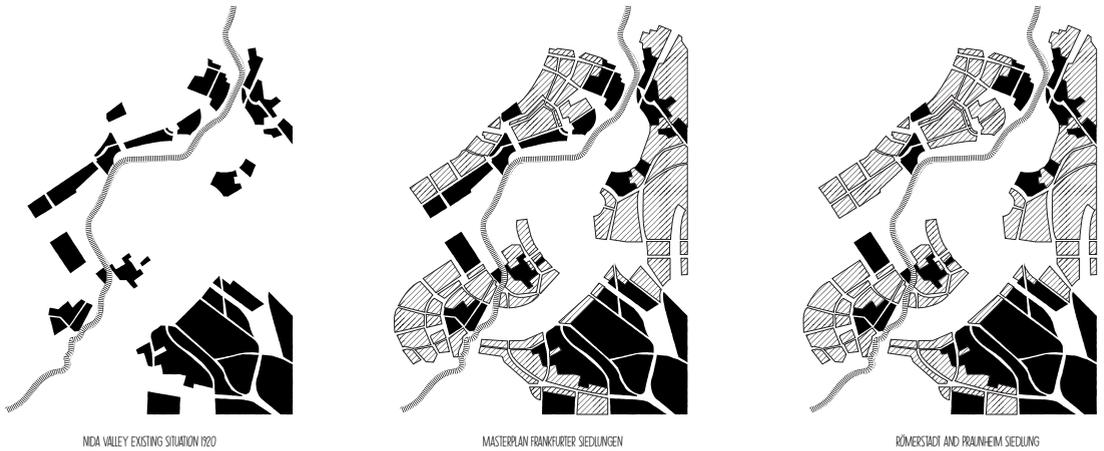
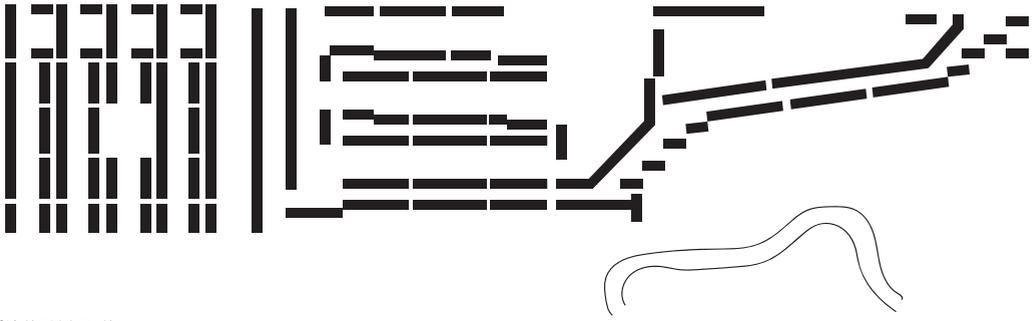


Figure 3.3: The Siedlungen Masterplan of Ernst May for Frankfurt

second era of Modernism is referred to as the ‘Development’ era. This era starts shortly after World War II when the European continent is plummeted into a housing crises and many cities need to be rebuilt or expanded with an eye for social housing. Projects such as the Pendrecht expansion to the city of Rotterdam as envisioned by Lotte Stam-Beese represent this era of Modernism. The final stage of Modernism is in its ‘final days’, the 1960s and 1970s. During this period the Modern through reaches its apex and is thusly referred to as the “Orthodox” period of Modernism. This period is represented through the project Gropiusstadt in Berlin by Walter Gropius. Each of these projects represent various aspects of the Modern philosophy and in each of their own ways have broken with the Traditional urbanism, or the ‘ancien régime’ as Benevolo (1993) refers to it.

As stated in the previous chapter, it is the Morphology that constitutes the Urban Tissue and in its turn on a grander scale the Urban Form. The most notable theory within Morphology on the basis of which the discrepancy between the Modern and the Traditional can be seen and felt is that of the very base-layer of Morphology; the Figure-Ground. It is in this core layer of Morphology that the breakage is most clear and the various ways in which the Modern form has distanced itself from the traditional Urban Form and Urban Tissue are visible. These various breaks will be analyzed through the observations of Trancik (1986) and Kropf (1996) regarding the Figure-Ground aspect of Morphology as discussed in the previous chapter.



PRAUNHEIM SIEDLUNG



RÖMERSTADT SIEDLUNG

Figure 3.4: Figure-Ground of the Römerstadtsiedlung and the Praunheimsiedlung

THE CONCEPTUALIZATION PHASE OF MODERNISM, ERNST MAY AND FRANKFURT

During the interbellum a lot of conceptualization regarding the philosophy of the Modern Movement took place with revolutionary figures in architecture and urbanism such as Le Corbusier. This time however is also one where the majority of the plans created remained on a philosophical or 'drawing-board' level. Only a few plans in line with the Modern philosophy were actually executed. One of the plans that was executed was the vision of Ernst May for Frankfurt and his masterplans for the various siedlungen that were planned for the expansion of the German city. The plans drawn up by May between 1920 and 1930 for Frankfurt are regarded by Panerai et al (1977) as one of the first consciously experimenting plans when it comes to the building block, it is a hard breakage with the until then used type of Figure-Ground; the closed building block. The evolution of the closed building block as conceptualized by Ernst May can be seen in the diagram published in his work "*Das Neue Frankfurt*" (1930).

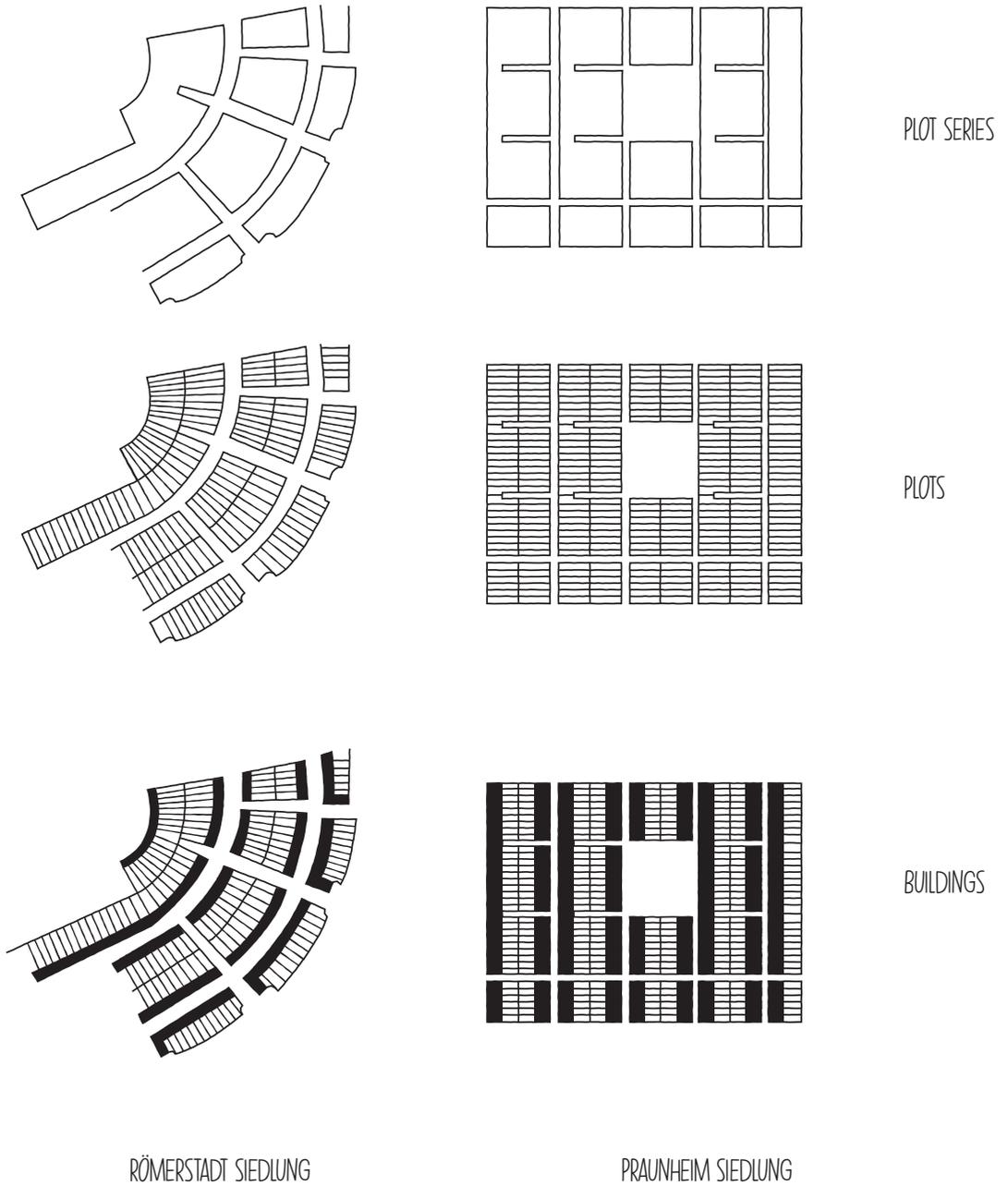


Figure 3.5: Römerstadt and Praunheim Figure-Ground layers as defined by Kropf

In the period that May designs his *siedlungenplan*, Frankfurt is known as a social-democratic municipality within the Weimar republic. One of the main objectives of the few social-democratic municipalities at this time is the tackling of urban problems and specifically an interest in the concept of social housing. As Frankfurt was an important industrial city within the country it has seen a huge population increase throughout the 19th century and the beginning of the 20th century. A consequence of this was the construction of large housing projects in the periphery of the old city in the style of the Multi-Nuclei or Network model, in line with the dominant Haussmann views on the expansion of cities during the 19th century. It is Ernst May as member of the *Stadtbaurat* (City Building Council) that proposes a different view regarding the expansion of the German city and proposes a new city planning policy for the masterplan of Frankfurt. This masterplan was subdivided in short- and long-term building program, complete with detailed plans for the first projects to be realized within this masterplan. Under the influence of May the city of Frankfurt saw an expansion of over 8,000 social dwellings in under three years (Panerai 1977).

The principles for the *siedlungenplan* for Frankfurt were drawn from a previous experimental dwelling project of May, the extension of Breslau (1921-1924). The major aspect of the extension of Breslau was the refusal of the continuation of the radio-concentric development of the old city (Panerai 1977, Henderson 1999). May was concerned with bringing the green environment of the rural countryside into the city, resulting in a dispersed development which May referred to as the *Trabantenprinzip*. This concept relied on the opening up of the building block within the created satellite towns, heavily influenced by the works of Unwin (1909) and Scheffler (1913). It is in the *siedlungen* of Frankfurt that May brings the concept of the satellite town as advocated by Unwin and Howard into practice in Germany (Vigano 2019). In contrast however with the developments on the American continent at this time however, they were not conceived as autonomous villages but rather as housing districts of a large industrial city (Panerai 1977). According to Grassi (1975) it is the large areas of open space that May introduces in his masterplan for Frankfurt, based on the satellite-town model that creates a “new continuity” for the city. This open space, states Vigano (2019), does not only have a functional and ecological component, it is the new definition of the spatial and architectural ratio and characteristics. The masterplan for Frankfurt reflected on the role of the open space in the urban construction of the city. In essence this means the reflecting of the ratio of Ground in the Figure-Ground level of morphology. The most notable parts of the Master plan where this reflection on space and the development of the traditional building

block are the Römerstadt siedlung and the Praunheim siedlung, both located in the Nidda Valley.

The Nidda valley, northwest of Frankfurt consisted of a conglomeration of the villages Rodelheim, Hausen, Praunheim and Hedderheim along the river Nidda. Around 1925 the suburbs of Frankfurt had reached the village of Hedderheim, extending the outskirts of Frankfurt almost up to the riverfront. It is at this moment that May introduces his Siedlungenplan for the development of the Nidda valley as the outskirts of Frankfurt with the concept of satellite housing districts along the river. It is the large open spaces that flow between these Siedlungen that shape the new Urban Form of Frankfurt and the order of the satellite villages. What stands out is the continuation or the aim of continuation of the Urban Form of these villages. Through almost an organic continuation May aims to define the borders of these green belts that separate Frankfurt maintown from these satellites (Panerai 1977). Two intervention areas of May, Römerstadt Siedlung and Praunheim Siedlung, are positioned at the edge of the proposed new satellite town and line the northwestside of the proposed park separating this newtown from Frankfurt maintown. Both of these are attached to the 'spine' of the new town, the 'Hadrianstraße' – 'Mithrastraße' sequence. The two areas have a contradicting geometry and thusly different types of Figure-Ground configurations. The northeast, Römerstadt Siedlung, is continuous and curving, placing it in the 'curvilinear' type of Figure-Ground configuration. The southwest, Praunheim Siedlung, is rectilinear and almost grid-structured, placing it in the 'orthogonal' type of Figure-Ground configuration. What is a common denominator however in the creation of the Figure-Ground for these siedlungen is the *poché*.

The relationship between the built and the public space is something that is kept throughout the proposed extensions of Frankfurt by May. It is almost a traditional approach to the making of streets. This is already visible in the theoretical works that May produces for his magazine "*Das Neue Frankfurt*" (1930). In this magazine May elucidates upon the 'evolution' of the traditional building block. In it he identifies three types of variation on the traditional building block. The first a variety of openness within the building block, majorly focused on the impact on Figure-Ground in regard of the openness of sides or corners of the classical European block. In his second alteration May goes further, translating the four sided building block into a directional set of plot series, upon which only the important streets that follow this direction are lined by built structure. Through this structuring there remains a creation of internal space within the block, creating a distinction

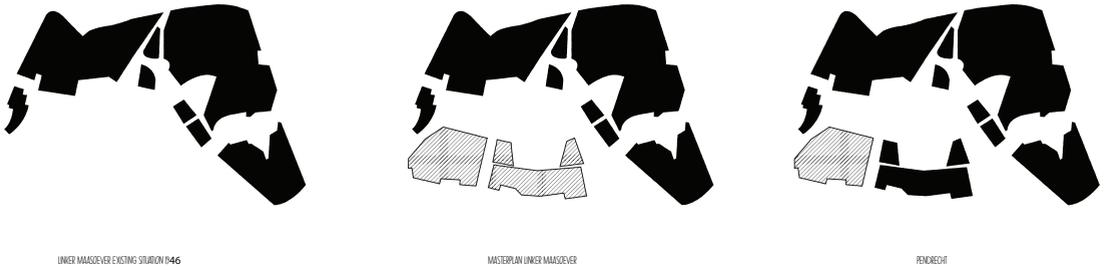


Figure 3.6: Stam-Beese and the Masterplan "Uitbreiding Linker Maasoever"

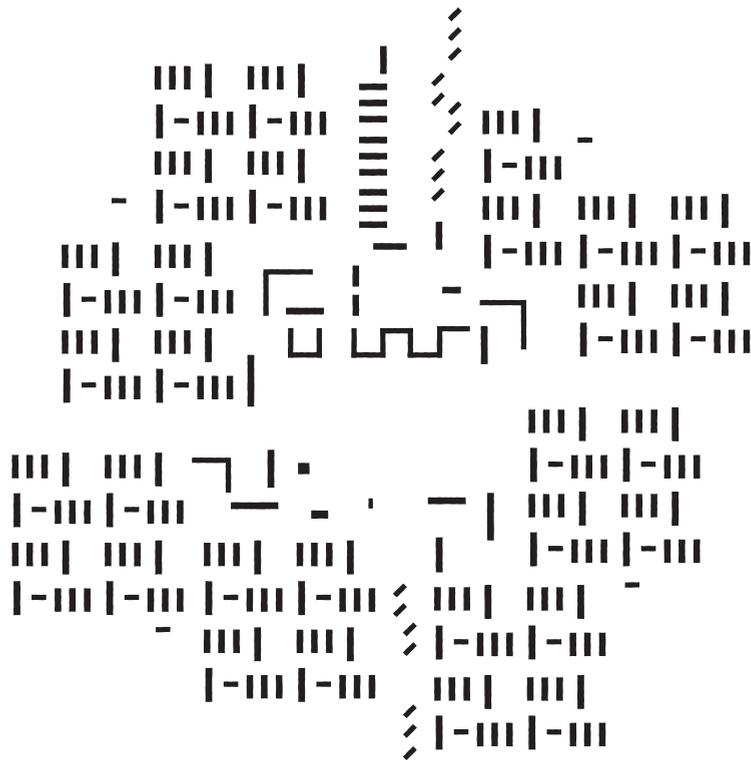
between public and private and front and back, the building block, if there is still to speak of such a thing in this alteration, does mark an exterior and interior space. The final stage of the alteration is the full disappearance of a sense of wholeness of the block where the entire structure is replaced by a set of bar-like structures. Within the *siedlungen* Praunheim and Römerstadt, May clearly demonstrates his preference for the second alteration of the building block. Through this the relationship between the street and the built form remains one that is almost classical.

Regarding both the Römerstadt and the Praunheim *siedlung*, all the built forms proposed by May have a clear orientation to and relation with the streets. This creates a clear distinction between the public and the private realm. There is a clear emphasis on the distinction between front-and-back and thusly public-private. Especially Römerstadt are an almost direct merge between the principles of Unwin and the vocabulary of modern architecture (Panerai 1977). The almost landscaped treatment of the two *siedlungen* in combination with the high regard of the division between public and private is reminiscent of the approach that Unwin took for the design of the satellite town Welwyn for London. Developed a few years later than Römerstadt, the Praunheim *siedlung* shows a departure from the curvilinear and more landscape approach that is so clearly demonstrated within its Figure-Ground and trades this for a much more rational approach of orthogonal configuration. This however without the loss of the ever so important private inner space of the plotseries designed by May. It is the transition to a more rationalist approach to this variation of the building block that results in a much more generic approach towards the design of the area with less space for exception.

Where the Romerstadt *siedlung* follows a more curvilinear Figure-Ground configuration, on the basis of the pre-existing urban order and the lines as dictated by the landscape in the Nidda valley, this a-priori context is ignored in the creation of the Praunheim *siedlung*.

There no longer are grid differences within the interior of this type of building block and distances are standardized among these blocks (Panerai 1977). Exceptions such as the extra attention given to the ends of blocks seen throughout the Römerstadt siedlung are ignored in the creation of the Praunheim siedlung, its creation relies more upon the systematic repetition of the type of building block variation rather than the creation of a unique ensemble responding to its natural and landscape context. The increase of the repetitive focus of this type and the extreme orthogonal focus diminishes what in essence was the last feature of the traditional building block in this type of Figure-Ground configuration, namely that of the enclosed space. Within the Praunheim siedlung the repetition, almost stamp-like configuration of the long row type of Figure-Ground configuration gives a heightened sense of directional movement rather than the completeness of a sequence of enclosed spaces that is the traditional Urban Tissue. The transition within the work of May from the Römerstadt to the Praunheim siedlung is in essence an excursion in the rationalization of the building block and the Urban Tissue. Even though May does keep with lining and defining the street through the built form in the Figure-Ground configurations for both projects, the relationship between the object and the space had changed. Where in Römerstadt the plot series were still closed off from the streets, this ceased to be in the Praunheim siedlung. This would eventually result in the disintegration of the tissue through the slow disappearance of the central space of the block that had traditionally been out of sight and away from the public domain. With the creation of the Praunheim siedlung the emphasis on the dismantling of the building block, as he had proclaimed in *“Das Neue Frankfurt”* had been realized and the way had been cleared towards a full approach of row-configuration of the Figure-Ground and the disappearance of the private realm.

The last remainders of the traditional European Urban Tissue in this stage of the development of the Modern view towards the tissue are the orientation and relationship of the building towards the street and the relationship between the building and the plot. It is in this stage with the design of Praunheim that the seeds are planted for the complete denouncement of private ground and the safe space outside of the public realm. The private space of the individual is only provided inside the built form, a notion that would be further extrapolated in the continuation and further development of the Modern philosophy regarding the Urban Tissue.



WIJK PENDRECHT

Figure 3.7: The Figure-Ground of Stam-Beeses 'Wijk Pendrecht'

THE DEVELOPMENTAL PHASE OF MODERNISM, LOTTE STAM-BEESE AND PENDRECHT

This continuation of the Modern philosophy in European cities is clearly visible after the disruptive nature of World War II. During World War II many of the European cities had suffered major losses regarding the real estate present. This phenomenon in combination with the explosive population growth shortly after the war (babyboom), resulted in a mass shortage of housing and thusly a large demand for new domestic projects. It is in this time that housing, specifically social housing and spatial ordnance is highly centralized while at the same time a growing idealistic notion of the 'makeable society' is present on the European continent (Blom, 2004). The war had torn a great hole into both the European economy and housing. This made not only the Modernist philosophy the basis for housing development but also the financial aspect of project development. A project where the acting of both the economic thought and the Modern philosophy can be seen put to practice is the development of the expansion of Rotterdam, specifically

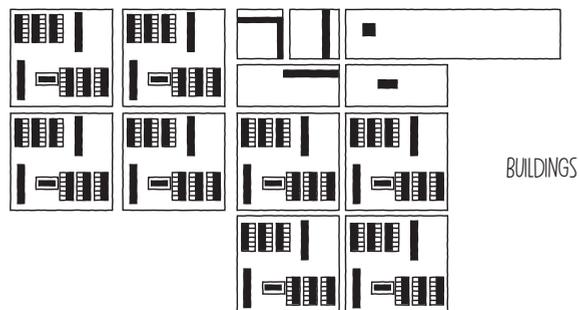
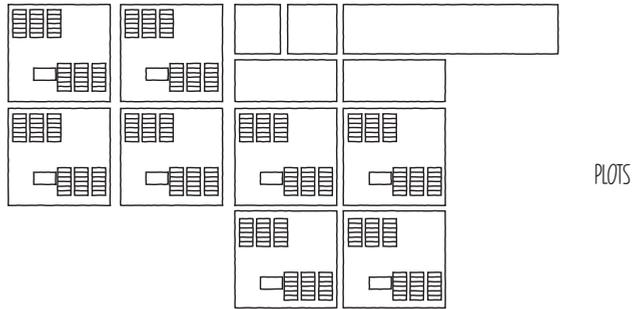
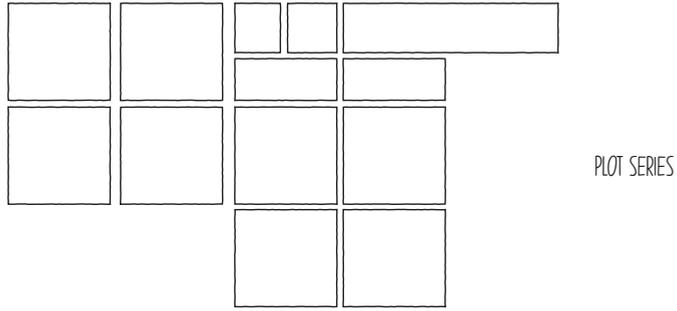


Figure 3.8: Pendrecht in the Figure-Ground layers as defined by Kropf

the district of Pendrecht by Lotte Stam-Beese. The main influence of the economic driver in this plan can be seen in the introduction of middle-high-rise structures meant to compensate for the low-rise terraced housing which was the predominant housing type in the Netherlands up until this time. The costs for the structural foundation of terraced housing would largely supersede the budgets available, resulting in the introduction of high rise into the Pendrecht plan and other expansion plans throughout Europe (Jansen 2004). The largest influences and developments of the philosophical driver can be seen in the further geometrisation of the ground-figure and the introduction of the plan revolving around the notion of a 'residential unit'. This notion can be seen as a turning point, or further development of the Modern philosophy in regard of the approach of the Urban Tissue and urban design in general (ibid).

The 'residential unit' or echelon domestique, is a principle of ordnance of the Urban Tissue into sections of around 50 to 150 families and found its first invention shortly before the war when the Modern philosophy was in its conceptualization phase (Blom, 2004). The plan for the echelon domestique came from functionalist principles by the hand of Ben Merkelbach. In his introduction to and exploration of this concept in the period 1935-1937, Merkelbach still envisioned an organic growth of the Urban Tissue, as seen in the visions of May for Römerstadt. The organic aspect, in further functionalization and rationalization of the Modern philosophy after the war, however quickly got lost. What remained of the idea of Merkelbach was that of an open type tissue where a small set of houses or terraced houses, known as 'units', would form the base of the plan (ibid). Though the size and scale of these 'units' remain undiscussed in the forming of the concept, the post-war period sees a development throughout the continent of a mixture of single-family houses combined with four- or five-storey housing blocks (Monclus 2017). It is this concept that is regarded as the new future for Urban Design and Urban Tissue by the Modern movement. It becomes the central theme of the seventh CIAM-congress held in Bergamo in 1949. Not unsurprisingly it is the Pendrecht site that is addressed by Stam-Beese and J.B. Bakema that is propelled forward as a case-study for the congress (Blom, 2004). Stam-Beese envisions for the Pendrecht settlement a repetitive composition of echelons and through that the creation of an almost neutral urban structure, reminiscent of the uniform, allsided grid structuring that was proposed by various architects such as Le Corbusier. Stam-Beese defined the echelon as the ordering principle in spatial, economic, social and esthetic setting, regarding the overall ensemble as subjected to the logic of the single unit (Jansen 2004).

As the logic and spatial principle of the individual echelon was one that was purely geometrical, or orthogonal rather, it is not unexpected to see this in the entire overall composition of the area of Pendrecht. Where during the conceptualization phase of Modernism there is still, to some extent, a regard for the organic growth of settlements, exhibited in the textual works of Merkelbach in "*Opbouwen*" (1935-1937) and the works of May, specifically Römerstadt, rationalization eradicates this notion. The polder site in which Pendrecht is envisioned and eventually realized is, as a result of this, fully ignored in the projection and development of the Figure-Ground for the Pendrecht area. All that is left of the original context and the organic features of the landscape is the orthogonal 'Dorpsweg' running as a North-South axis through the plan of Stam-Beese (Jansen 2004). It is from this axis that the geometric, orthogonal grid is created. Within this it is, as stated before, the logic of the echelon that dictates size and scale of said grid. Regarding the plot series it can be seen that even the exceptions within the regularity are strictly following the size and scale of the individual echelon, either being doubled, halved or quartered dimensions of the standard unit. This main spatial structure became the dictation for the entire area, creating a rigid and dominant system that formed the composition of the ensemble that is Pendrecht. It is only through the regarding of the echelon that this composition can be explained and experienced, it is the main unit of the plan that dictates the parceling and lay-out of the infrastructure, seemingly fitting together like pieces of the same puzzle (Blom 2004). Where this structuring of Plot-series in regard of the created network in the interbellum also marks the division between public and private, this division is lost in the developmental phase of the Modern philosophy.

In the Pendrecht plan the echelon is not subdivided into singular homes and individual plots. It is the economic component, as stated before, that resulted in the mixture of middle-high-rise and terraced houses in the plan. The composition of these two types in comparison to one another can be highly varying, which is also visible in the many variations drawn for Pendrecht by Bakema and Stam-Beese (Jansen, 2004). What remains constant however is that within the field of the plot series there is a division between a slight part that is used for the typology of the terraced house, and thusly the individual plot, and the middle-high-rise buildings with the loss of private plots. These contradicting plot-structuring domestic typologies resulted in the unique and notable plot divisions that can be seen on the plots resolution of the morphology of Pendrecht. This results in its turn in a division of the public and private realm that is of a much more diffuse nature than seen

in the plans of May for the Frankfurter Siedlungen. Stam-Beese stated about this division between public and private that “the remarkable parceling a sense of openness is achieved that is completely free of the grid-structure of blocks lining streets.” (ibid). In her eyes this would result in the creation of numerous new spatial relationships and usages through the interplay of low and (middle)-high-rise within a free playing field. In line with the statement of Stam-Beese, the Modern architects of this time believed that the opening up of the space and the decrease of private space in preference of shared public space would result into a more diverse usage of said space and a larger increase in social interaction. The echelon in this case was thusly not only projected as a spatial concept but rather simultaneously as a sociological concept. In this sense it was based on the idea of social cohesion through the formalization of the unit while at the same time offering diversification through the presence of various types of housing within the unit. Stam-Beese wondered in this case whether it would be possible to mix the two densities (row-housing and middle-high-rise) projected within a single unit, without damaging the demands of the varying targeted inhabitants and simultaneously ensuring a homogenous interpretation of the echelon as a single base unit for the entire plan (Blom, 2004). This latter objective however did not indicate for Stam-Beese that the entire area had to be of uniform architectural vocabulary and eventually resulted in a multitude of architects designing areas within the repetitive pattern of the open-space Urban Tissue that was the echelon as envisioned by Stam-Beese.

In essence the singular echelon in the plan of Stam-Beese was an ensemble of longer middle-high-rise structures and short rows of terraced housing, all north-south oriented and set back from the street, strengthening the notion of the free field within the network in which the built volume experiences a sense of free positioning within this orthogonal field-structure. The decrease of private and increase of public realm within this orthogonal system does however lead to a sense of fluidity of the public realm as it moves through the free-field as can be seen on the building-level of the Morphology of Pendrecht. It is in this highest resolution of the Figure-Ground that the sharp contradiction between the rigidity of the orthogonal system that dictates, plot series, plots and buildings and the experience of the free-field can be seen. Where every built form seems to follow this rigidity, there somehow seems to be a fluidity of the Ground component of Figure-Ground. This fluidity of space that is a result is a consequence of the detachment of the built form from the network that is created through the plot-series. The main contributor to this effect is the setback from the street that is present in nearly all the built forms

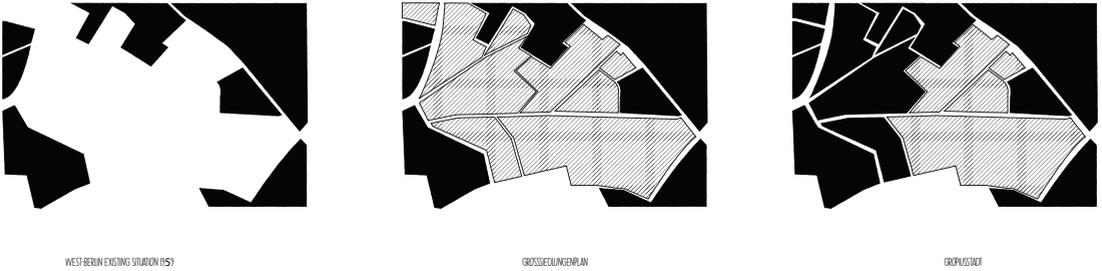


Figure 3.9: The Großsiedlungen Masterplan of Berlin

realized in the Pendrecht plan. The open parceling that is seen on the plots level resulted in this multitude of space that engulfs the built forms (Jansen 2004). This can be denoted as the main evolution of the built form and Morphology during this phase of development of the Modern philosophy.

Morphologically the developmental stage of the Modern philosophy can, in comparison with the Conceptualization phase be regarded as a shift in the relationship and spatial sequence of public and private space and the shift in the relationship between the street and the built form. Seeing this in regard to the evolution of the building block as drawn by Ernst May in “Das Neue Frankfurt” (1930), the full deconstruction of the building block can be seen, with only a small remainder of the final stage of the ‘evolution of the building block’, namely that of the short rows of terraced houses that are present in the free field that is the echelon. The sense of free space and objects within that is empowered through this decrease of private grounds and the deconstruction of the traditional relationship of the built form (Figure) to the street (Ground). Within the Stam-Beese plan for Pendrecht it is no longer the Ground that is marked through the Figure but the Figure that is positioned within the Ground. The network is no longer carved from the ensemble of the Figure but rather denoted by the Plot series. All in all it can be stated this stage shows a breakage between the resolution of the Plot series and the Buildings. This breakage of a link present in the traditional observation and creation of the Urban Tissue would continue to evolve during the last stage of Modernism; the Orthodox period.

THE ORTHODOX PHASE OF MODERNISM, WALTER GROPIUS AND GROPIUSSTADT

The further development and application of the principles of functionalist urbanism regarding the Urban Tissue can be seen in the last phase of the Modern philosophy; the Orthodox period. The



Figure 3.10: Figure-Ground of the Gropiusstadt plan by Walter Gropius and TAC

roots for the radicalization of the thoughts of CIAM in the interbellum, resulting in the Orthodox period can be traced back to the early 1950s. At this time it is two events that spark the Orthodox approach towards the fundamentals that the Athens Charter advocated for, namely the publication of the Sixteen Principles of Urban Planning (1950) for Berlin and the CIAM 8 Heart of the City (1951), reiterating the viewpoints of Modernism (Diez 2016). Facing, again, an explosive growth of population, this period specifically addresses the major construction of mass housing that was introduced in European cities between the late 1950s and the early 1970s. As the demand for housing increased and a substantial improvement in living conditions was necessary, even more pragmatic views regarding housing development were adopted. The architecture and urban approach can be seen as one that is of almost orthodox nature in regards of the definition of functionalist urbanism as defined by CIAM. In particular on the basis of the notions in the Athens Charter, drawn up in the period 1933-1943 (Monclus 2017). The erection of mass-housing complexes and estates had risen to be common practice throughout the European continent during the 1960s and 1970s, all in an approach that shows a departure from local vocabulary in favour of an international uniformity as advocated in the

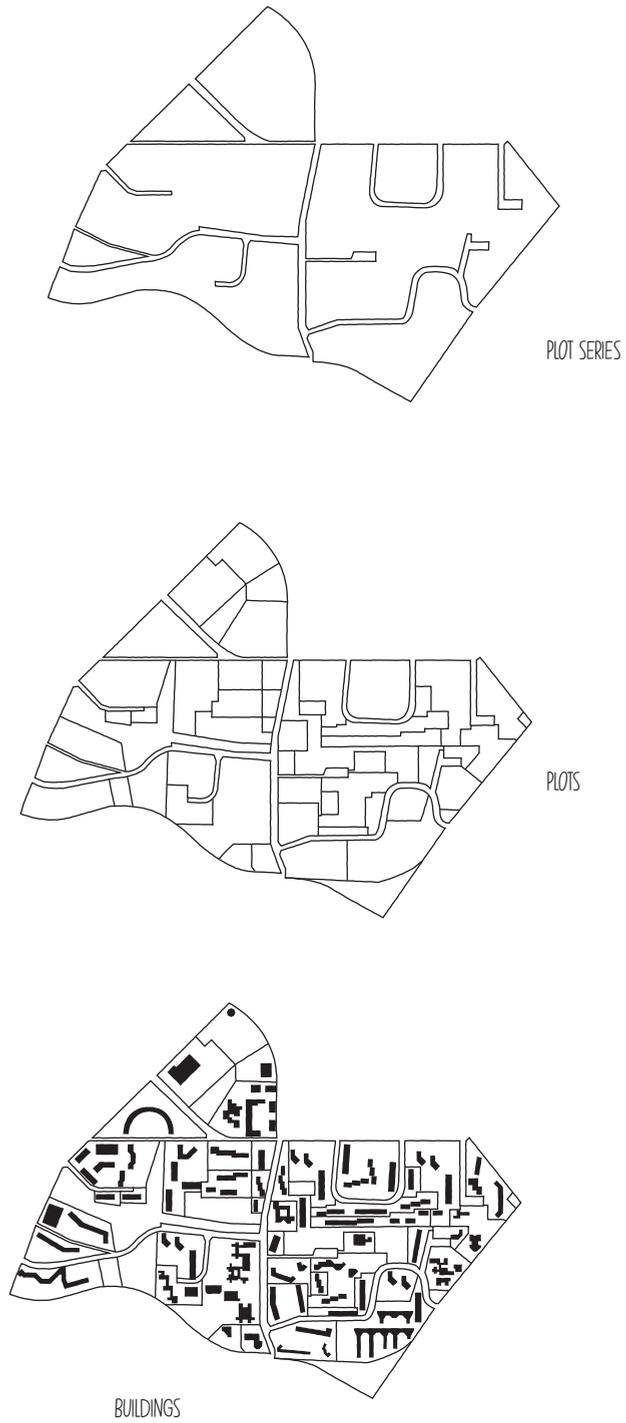


Figure 3.11: Gropiusstadt Figure-Ground layers as defined by Kropf

early years of CIAM. Though it is true that there is a higher amount of diversity in architecture in the Western half of the continent, the period is majorly characterized by the high standardization of housing and extreme uniformity in the Urban Form (Panerai 1977). Frank Wassenberg defined this period in European architecture and urbanism as one where “the similarities between countries had never been so great.” (2013).

Shortly after the war and throughout the 1950s, during the developmental phase of the Modern philosophy regarding the Urban Tissue, the dismantling of the traditional European building block as a process had continued. A process that would only be elaborated upon even further during the Orthodox period of Modernism that followed. The block can be seen in this period as an entity that shrinks to the size of the singular unit (Panerai 1977). One however that is of mass proportions, multi-story with large footprints. The ‘block’ in this case can be seen as being separated even further from its relationship to the network and the plot-series as was already the case during the previous Developmental phase. What is aimed for in this period is an even further fluidization of space that was introduced in the previous period and seen in projects such as Pendrecht. The spatial relationship, or the Figure-Ground in this case, was aimed to be of an even more neutral character (Panerai 1977). An example of the philosophy in regard of the development of the Urban Form and the Urban Tissue at this period of time can be found in the design of the Großsiedlung Gropiusstadt in West-Berlin.

Gropiusstadt, designed by German born architect Walter Gropius with his companion Wils Ebert and the studio TAC (The Architects Collaborative) is an example that shows the development of the Modern philosophy of the Orthodox period in relation to the Developmental period. As a project designed in Western Europe, despite the favour of standardization within the building itself, the area showcases a multitude of typologies, a stark contrast to the uniformity of typologies that is seen in projects shortly after the war such as Pendrecht. Even though there is a great diversity in typologies in the area, the project still showcases the principles of functionalist urbanism, as thought up by CIAM in the interbellum. The large, fluid open areas that are not hierarchically defined and the formalization of the high-rise building are applied in an almost Orthodox fashion regarding the assumptions of the Athens Charter (Monclus, 2017). Specifically the original plans for the Großsiedlung showcased the hardline application of the ideas of CIAM. The original plans for Gropiusstadt showcased an ensemble of circular, uniform buildings that were divided into various zones; Green,

Commercial, Settlement. In addition to this, various linear apartment blocks were to highlight the main streets and give orientation and definition to the vast amount of green space in between all these blocks (Wang & Prominsky, 2016). The final layout of the *siedlung* however moved away from this spatial concept. Wils Ebert advocated for a more functional approach toward the individual built unit, resulting in a more free approach of the form and positioning of each of the buildings envisioned for Gropiusstadt. In combination with this the rigidity and repetitiveness of the sequence of circular spaces in a similar fashion that can be found in an earlier project (the *Hufeisensiedlung*), was redeemed for a single, continuous landscape (*ibid.*). When regarding this open space, visible in the addressing of the resolution of the plot series of the *Großsiedlung*, it is visible that a more organic configuration is present. This can be attributed to the design guidelines for the project that were laid down by Walter Rossow, responsible for the design of the spatial continuum. This was done by Rossow via a merge of topographical and geometrical path layout. This specifically can be seen in the plots resolution of Gropiusstadt's Morphology. The overall grouping of the plot series stays quite close to the specific topographical oddities of the site, almost reminiscent of the approach of Ernst May for the *Römerstadt siedlung* in Frankfurt. Contrary to the plots approach that can be seen in that period, there is a full departure from the balance private-public in favour of the all public landscape flowing through the area. This can be seen in the large plots that bear little to no relation to the built form that is put atop these plots. The orthogonal and angular parceling forms a stark contrast with the organic and curvilinear plot series, dictated by the topographical properties of the site. The latter being one of the leading concepts in traditional and early Modern development of the built form, as can be seen in examples such as *Römerstadt*. In contradiction, the morphology of the Orthodox Modern philosophy becomes one of the object, or the loose Figure, within the open, fluid space that is Ground. The object in the landscape, a concept envisioned as ideal by architects such as Le Corbusier in plans like the *Ville Radieuse* and the *Unité d'Habitation*.

It is in this stage of Modernism that the relationship, or the sequence, of street-plot series, plot-plot-series, building-plot and building-street is negated (Panerai, 1977). It is at this stage, also visible in the design for Gropiusstadt, that the character of the individual object is regarded as having a much greater value than the composition of the whole. This view results in a scattering of buildings each with their own logic. A major feature in this logic is the shift from the horizontal component and orientation of the building, something still present in the Stam-Beese plan for *Pendrecht* and the previous phase of the Modern

philosophy, to a more vertically oriented approach of the individual object in the openness that is the Figure-Ground configuration. The plots are grouped together within the plot series but the buildings that sit atop these plots do not necessarily group together following these plot series, as was the case for the traditional and early Modern Urban Tissue. It is in this stage no longer that the elementary grouping of buildings through their grouping of plots and their association creates the Urban Tissue (Panerai 1977). Rather the concept of the Grands Ensembles is introduced and predominant at this stage of the Modern Philosophy (Diez 2016). These Grands Ensembles are not only present in the various siedlungen scattered around the larger cities of Western Germany, but also in the former Soviet Union, and other western countries such as the Netherlands and the United Kingdom with projects such as the Bijlmermeer and Park Hill.

It is these similarities of the Grands Ensembles throughout Europe that showcase the radicalization of the urban design strategies of CIAM in the built Urban Form throughout from the late 1950s to the early 1970s. Similar strategies and experimentation in regard to the Figure-Ground have been adopted and applied both in the East and the West of Europe in these times (Diez 2016). This radicalization is attributed to a major political dimension adopted by architects and urbanists at this time (De Vos & Geerinckx, 2016). As De Vos states, the radicalization of the CIAM ideals occurred as a belief was held that this Grands Ensembles form of architecture would free the people from the 'traditional parish structure' and lead them towards socialism and a more social and inclusive society. The grounds for the Modern Philosophy in this period is heavily reliant on the concept of social-housing and, as stated before, the demand for this due to the large population increase. Projects during this time advocate a sense of progressiveness and the final stage of breakage with the traditional approach towards the Urban Tissue and traditional urbanity within the European cities. Aimed with this contrast was freeing the citizen from the burden of the old societies values, opening for them a new future in their cities. Even though the vast projects realized in this time in the continent caters the excessive demand for housing and benefited largely to the increase of living standards, it is perhaps the approach of the Urban Tissue and the Figure-Ground that is most remarkable and memorable.

The 'Object-in-the-Park' approach that is the Grands Ensembles layout of the Urban Tissue is one that shows the starkest contrast and break with the traditional European Urban Form and Tissue. It is in neighbourhoods and districts such as Gropiusstadt that the relation of the three resolutions of the Figure-Ground, that of Plot-series,

Plots and Buildings, seems to have been cut. A sense of floating objects within the fluidity that is space appears to be prevalent in these plans and designs. It is the vertical component of the singular object that dominates the vast landscape in which it is situated (Diaz 2016). It is the functionality and the radicalization of the CIAM principles of the Athens Charter that resulted, according to Diaz, in a highly interchangeable application of standardized and globalized Urban Tissue, unrelated to the traditional European city and found throughout the continent. This very radicalization of the tenets of CIAM regarding Modern Urban Planning, into a larger, more standardized and hyperbole approach that is the Grands Ensembles that manifested itself in the isolation of the singular building within the Tissue that is typified by its vast openness (Panerai 1977). The negation of the direct relationship between the Plot-Series, Plots, Buildings and the groupings of buildings that relate to one another and ensure the coherence of the Tissue that is present in the traditional European Urban Form within the apex of the Modern philosophy sparked such a flow of criticism that it created its own downfall. Through publications of Alexander (1973), Lynch (1960,1981), Jacobs (1961), Rossi (1966) the radicalization of the CIAM tenets was highly criticized, resulting in the falling into disgrace of the Modern movement. Eventually the Modern Philosophy and its iterations, varieties and excerpts were declared dead on July 15th 1972, with the demolishing of the Pruitt-Igoe complex only a mere 17 years after it was designed and erected, through the words of Charles Jencks in his work *The Language of Post-Modern Architecture* (1977).

THE MODERN-TRADITIONAL DISCREPANCY

As stated in the introduction of this chapter, the presence of a discrepancy in viewing and dealing with the Urban Tissue is undoubted. That this discrepancy is one that is merely two-fold, namely that of Modern versus Traditional, as stated by Alexander (1973), Benevolo (1993) and Rowe (1978) however, can be debated. As Childs (2000) together with Tournikiotis (1999) showcase, the Modern is not necessarily a uniform period, just as the traditional has a multitude of interpretations. The multitude of iterations that is collectively known as Modernism makes it key to understand the various ways in which this discrepancy has manifested itself and how it manifests itself when examining a quarter of the city that is aimed to be redeveloped in visions of the continuation of the Urban Form of the city.

Though each of the periods of Modernism had its own characteristics, certain aspects and conditions are similar. The rationality that is

foundation for all of these iterations is one that, according to Panerai (1977) contributable to the social condition of the city in these times. He states that rationality within the urban order appears only when two factors converge namely those of necessity or opportunity to rapidly construct large numbers of buildings and simultaneously an agency that can assume this responsibility. During each of these periods a different level of rationalization and eventually radicalization of rationality is present, yet each of these periods is characterized by the need of fast and vast expansion of the city. How this is realized however differs greatly and different aspects in regard of breakage with the traditional sense of Urban Tissue can be defined.

During the interbellum there was little to no construction of large scale projects happening and the work of CIAM and those architects deemed 'Modern' through analysis of their works both literary and in practice remains largely fictional and idealized. One of these is the product of the Athens Charter that occurs during the conceptualization phase of the Modern philosophy. There is however a large scale project that occurs in the Germany of the interbellum, more specifically the outlay of the Siedlungen Masterplan for Frankfurt by Ernst May. Realized between 1920 and 1930 the various siedlungen designed by May showcase the first shift in rationalization of the Urban Tissue and the changes that occur in regard to this tissue under this philosophy. Where in the early days of Modernism, as can be seen in the Römerstadt siedlung, there is still a high sense of Genius Loci and contextual reaction in the plans, this is altered in favor of rationalized, orthogonal planning in the siedlungen planned later in that decade, as exemplified by the Praunheim siedlung. What remains however in this time is then the relationship between the Plot-series and buildings, or in other words the street that is defined by the adjacent built volume, and the individuality of the small plot and the relation between the plot and the building. Specifically with this latter relationship in combination with the building-street relationship, it is the relationship between the private and the public realm that is still clearly articulated. Though the building block of May in Römerstadt and Praunheim might not be of the traditional European kind as a four-sided closed ensemble, the relationship towards the street and the private aspect of the center of the traditional building block is maintained. This stage can be seen as the first attempts to open up the building block and at this time do not necessarily showcase the negative characteristics that are attributed to the Modern tissue by writers such as Rossi (1966), Jacobs (1961), Klasander (2013) and Tasan-Kok (2014).

This changes however after the Second World War. The relationship between the private and the public realm at this time is becoming more

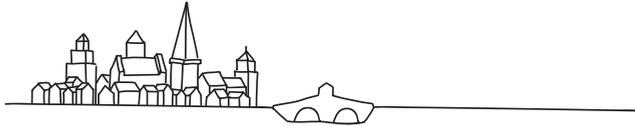
and more diffuse. Though there is still a mixture of different types and thusly a manifestation of both public and private grounds, a movement towards a favouring of the public realm over the balance between public and private is already clearly present. In projects such as Pendrecht by Lotte Stam-Beese for the expansion of the city of Rotterdam this mixture can be seen. It demonstrates already the full opening up of the traditional building block. In addition to the decrease of private space on the Ground aspect of Figure-Ground the positioning on the level of buildings in Figure-Ground demonstrates a departure from the distinct relationship between the plot-series and the buildings. This means in practice that the plot-series are failed to be articulated clearly in the Figure component of the Ground-Figure, resulting in the opening up of space and the start of the diffusing of the relationship between private and public into what eventually would become a space of vagueness and ambiguity without a clear spatial character (Rowe 1978, Klasander 2013). The traditional gradient of public, semi-public, semi-private, private starts to become more and more absent as the rationalization and radicalization of ideas proposed during the conceptualization phase of Modernism continues. The Echelons proposed in this time as a base for Urban Tissue showcases the departure from this gradient and the departure from the ground-bound settlement in favor of the vertical component, diluting the relationship that is Figure-Ground.

This dilution continues as the dictations of the Athens Charter are observed and applied more radically and enters Modernism into its Orthodox period between the 1950s and 1970s. Most of the criticism that is cast on 'Modernism' originates from plans issued and executed in this period of time. The notion of voids and no-mans-land (Klasander 2013) and loss of scale (Tasan-Kok 2014), are attributed to this period. It is in the Orthodox period that the most radical break with the traditional Urban Tissue is made. Large, fluid open areas without hierarchical definition and the formalization of the high-rise building are applied in this period throughout Europe. The relationship between streets and plot-series, between plot-series and plots and perhaps most importantly between the built and the unbuilt is almost fully negated. The role of the Figure-Ground becomes reversed in this period, a full breakage with the traditional Figure-Ground and a tendency that had already been noticed to be set in in the pre-Modern period by Camillo Sitte in his 1889 book *"The Art of Building Cities"*. As Panerai (1977) characterizes the Figure-Ground of this period he states that in this time the relationship of the building and its surrounding space was no longer the space. Or in other words, where the traditional Figure-Ground was about the Ground created through the Figure, it is in this period that

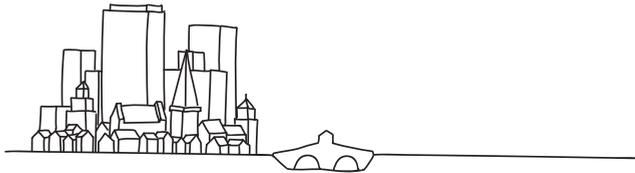
the Figure is nothing more than a sole object amidst the vast amount of space that is the Ground.

It is thusly of great essence to understand what Urban Tissue is at hand and to analyse this Tissue in relation to the notions as brought forth by Trancik and Kropf in order to approach this area for redevelopment when this is aimed to be achieved through a continuing fashion of the Urban Form of the traditional European city.

CITY EXPANSION



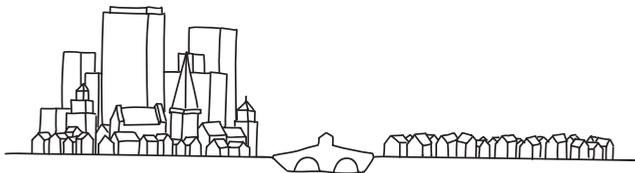
A MATURE CITY IN NEED OF EXPANSION



VERTICAL OVEREXPANSION



HORIZONTAL OVEREXPANSION



VERTICAL + HORIZONTAL OVEREXPANSION



EXPANSION THROUGH MULTIPLICATION

Figure 4.1: What is good or bad in an approach to design for the city? (Leon Krier, 2009)

QUALITY OF URBAN TISSUES - GOOD, BAD OR DAMAGED?

The Dutch traditional architect Granpré Molière, over eighty years ago, posed a rhetorical question in regard to the character of the Traditional and the Modern tissue. He asked why it was that the old city was so much more attractive than the new suburbs. In the first chapters of this book various attributes to the characteristics that make up the Urban Tissue have been discussed, but have yet to be brought to a value judgement. As the approach for the continuation of the Urban Form and Urban Tissue of the Traditional European City, finds its value in those characteristics attributed to these Tissues, it is key to examine and define what factors create this value. What makes a Tissue or spatial configuration experientiable as pleasant and what makes it unpleasant? Or to put it more bluntly: What makes it Good or Bad?

Starting already from the pre-conceptual phase of Modernism, and the dismantling of the Traditional forms of Urban Tissue at the end of the 19th century, it is Sitte (1889) that criticizes the way Urban Tissue will start to be approached by contemporary and future architects and urbanists of that time. He states that the unpleasantness of the city planning of that time is due to the loss of all the continuity and the artistic tradition that is valued in city building. Regarding the artistic principle of the creation of the Urban Tissue, Sitte argues that it is the relationship between the built and unbuilt, the Figure-Ground, that is the root of the experiencing of an Urban Tissue as Good or Bad. In line with this it is Anna-Johanna Klasander, in her work *"The Challenges of the Modern Urban Landscape"* (2013), that argues for the Urban Morphology and specifically the spatial relationships of the Figure-Ground of the Modern areas to be studied and altered in order to fully understand their contradiction in regard to the traditional Urban Tissue and bring them closer to this. Though crediting the experimental attitude of the Modern period with the improvements of social standards and the catering of a large demand through housing shortage, Sitte (1889) discredits the approach of catering the growth of the old European city. An approach that, according to Monclus (2017) shifted from one where the basic considerations concerned minimal standards of housing, towards one where the basic consideration was seeing the city as a functional subject. The approach of this growth is one

where the old Urban Form and Urban Tissue is completely shattered, according to Sitte, through the creation of areas with widened streets and tall, bulky structures. It is the artistic principles of the old Urban Tissue, Tissue deemed 'good' and 'functioning' by Sitte, that can be varied with without abandoning every artistic consideration that had been the foundation for city planning up until the 20th century. It is the neglect of the values of the traditional Urban Tissue that, specifically in the orthodox phase of Modernism, created the loss of urban values (Berman 1982).

It is these Urban Values that have been debated ever since by notable writers and architects such as Lynch (1960), Jacobs (1961), Rowe (1978) and Rossi (1966). Their observations revolving dominantly around the spatial relationship within the Urban Tissue (Klasander 2013, Sitte 1889, Tusan-Kok 2014, Krier 2003, Monclus 2017). It is on this level that the observant and critic denounces major components of plans of the 20th century over the more traditional plans for Urban Development. The traditional Urban Tissue is valued by each of these observers and analysts as one where the relationship between street and building is clear and the distinction private and public is clear. The traditional Tissue being one where the human scale is present and the network and tissue are integrated parts of one whole (Klasander 2013). It is the relationship of public-private, building-street and *poché* that define the open space (Ground) in the Urban Tissue. It is the traditional *poché* in the Figure Ground that brought the fabrics we know and recognize together with the known and recognizable Ground configurations. The traditional knows the courtyard, the street, the quarter, the square, whereas the various districts of the 20th century are criticized today for entering a state of ambiguity and vagueness in regard to their Figure-Ground configuration. Their character is hard to label and the relationship between private and public realm is diffuse. Plans are characterized by a lack of readability and the spatial open layout results in a fluidity of space that is hardly interpretable as a tissue, it is almost an open wound in regard of the traditional Tissue. It is exactly the base of the approach as defined thus far in this research, the Figure-Ground configuration, that in these malfunctioning districts of the city is hard to define through the terms that relate to the traditional Urban Tissue. The spatial particularities that are so recurrent in these districts are not adequately addressable with the architectural terminology and theories at hand (Klasander 2013). Perhaps, the Urban Tissue of this 'Modern' time period should then not be tried to be classified and put to words through the same terminology that we use to address the traditional Urban Tissue. As there are still problems to address the underlying structural conditions of the urbanity of these districts (Klasander 2013),

understanding this and defining what characterizes Good and Bad tissue is of essential key before being able to deal with and overcome the problems attributed to the Modern parts of our cities. As the core of it lay, according to Klasander (2013) and others in their spatial configuration, but simultaneously, as the previous chapter showcased, these still uphold certain characteristics of the Traditional Tissues. As many consider the problems that are attributed to malfunctioning areas of our cities, those of segregation, poverty and criminality, to be a product of its very design (Tasan-Kok 2014, Klasander 2013), it is both new Urban Development and alteration of existing Urban Tissues that requires an understanding of the characteristics that makes qualitative Urban Tissue that can be seen as a continuation of the Urban Form of the Traditional European city.

THE NORMATIVE QUESTION OF THE URBAN FORM

Stephen Kendall (2010) defines the Urban Tissue as that what comprises coherent neighborhood morphology, exhibiting recognizable patterns in the ordering of buildings spaces and themes within which an organizing set of principles can be derived. The majority of vocabulary and terminology that we use to define these patterns and themes in order to derive the organizing set of principles is largely based on the traditional Urban Tissue, and thusly not always applicable to the Urban Tissues of the 20th century (Klasander 2013). As with the work "*Good City Form*" (1981) of Lynch there is a sense of a 'good' Tissue, and thusly inherent to good, a bad form of Urban Tissue. Or, as Lynch defines it himself, discussing the built form must use norms about good and bad in order to strive for improvement and development of the existing city. In chapter two of this book "*The Importance of Urban Form and the Introduction of Urban Tissue & Morphology*", it is stressed that the perception and definition of the city occurs through its Urban Form and thusly through the Urban Tissue. Following this train of thought, the answer to the question that Lynch poses in "*Good City Form*", namely; "What makes a good city?" would be good Urban Tissue. This would then change the question that Lynch deems to be necessary yet simultaneously a naïve one, to "What makes good Urban Tissue?". The dimensions that Lynch sets out in "*Good City Form*" (1981) to assess the quality of the City can be interpolated and applied as a useful tool for the quality assessment of Urban Tissue. Lynch's stance is concerned with the connection of the human values to the spatial, physical aspects of the city. As described in chapter two of this book it is the Urban Tissue that is inherently connected to these human values and ambitions. As the question at hand, "what makes good Urban Tissue?" is one that is of a normative nature, the principles that Lynch

discusses regarding a normative theory for City Form are of most use. In the prologue to *“Good City Form”* Lynch already clarifies that the normative theory regarding City Form is not new. Neither is examining the city from the aspect of Urban Tissue, as various authors such as Rowe (1978), Sitte (1889) and Alexander (1973, 1977) have done so before. The interpretations and usage of a normative theory however can vary. The purpose of defining what is deemed ‘Good’ and what is deemed ‘Bad’ in regards of examining the city through the Figure-Ground and Morphology and thusly as an Urban Tissue is to define such a normative theory. Up until now this book has dealt with the historical exploration of the City Model, the importance of the role of the Urban Tissue and the discrepancy between two approaches towards this Urban Tissue namely the Modern and the Traditional. It is through normative theory that these two can be examined not only through their differences as products of time and philosophy, but also through a sense of form value based on different observations and theories of notable figures that have been consulted throughout the first three chapters of this book. Various architects have produced different views in regard to a normative theory on the discrepancy of the Modern and the Traditional Urban Form and Tissue. Notable examples are Rowe’s *“Collage City”* (1978) where the two are opposed to one another and neither can surrender to one another and Alexander’s *“Notes on the Synthesis of Form”* (1973) where the formmaker should be concerned with the creation of an ensemble where the two react to one another while simultaneously forming a whole without losing their distinct characteristics. In a time where, according to Rowe (1978) the ideals of CIAM and the modern city are everyday found increasingly inadequate, a lack of normative theory in regards of dealing with the excurses of these ideals seems to be present. This lack of normative theory is one that Lynch notices in his work *“Good City Form”* (1981) and wishes to address. Over twenty years later Talen & Ellis (2002) observe little to no change in regards to the creation and attention for normative theories to deal with the Urban Form and the Urban Tissue. In their eyes this cautious attitude towards normative theory can be attributed to various philosophical observations of the late 20th and early 21st century. It is in these observations, state Talen & Ellis, that the suggestion is made that facts are separate from value, that beauty is subjective, virtues cannot be identified let alone ranked and most of all that there is no necessity to decide between different substantive conceptions of what is good. According to the two in their paper *“Reclaiming the Search for Good City Form”*, it is at the current time, when the dust of the Postmodern Relativism starts to settle that the quest for a normative theory can be continued. In that same paper, the two set out various possible objections formmakers might have as to re-introducing the concept of

a coherent, normative theory of the Urban Form. The major objections the two come forth with are threefold. The first is the possible negation of the importance of the Urban Form, a matter which has been addressed in the second chapter of this book "*The Importance of Urban Form [..]*". The second is about the historical component of a normative theories in regards of the Urban Form, as addressed in the first chapter of this book "*The City Model as Base of Departure*". The third and final is the posed question that to arrive at a powerful normative theory of Urban Form, a foundation or at least consensus for a base of this theory needs to be found. Over the course of the first and the second chapter of this book it can be seen that various normative stances in the past have similar grounds that are started from and in these chapters is advocated for, namely that of the Figure-Ground, backed by various researchers and formmakers such as Hall (2008, 2014), Barke (2018), Klasander (2013), Kropf (1993, 1996), Panerai (1977), Sitte (1889), Trancik (1986) and Rossi (1966). In this lack of normative theory to deal with the cities we have at hand, Talen & Ellis (2002) defines a few basic approaches from the past century that can form a base towards a new normative theory. According to the two, the incentive towards a new normative theory, namely Kevin Lynch's "*Good City Form*" (1981), needs to serve as a backbone towards the dealing with the Urban Form of the contemporary city. In addition to this the large body of historical literature regarding city design, embodied through "*The Art of Building Cities*" (1889) of Camillo Sitte is advised in combination with the observations made by Christopher Alexander (1973, 1977).

So far this book has examined the evolution of the City Model throughout time, the role of the Urban Form as the physical manifestation of the ideals and ambitions of the City Model, the role of the Urban Tissue within this Urban Form and distinguished that there are two approaches towards dealing with the Urban Tissue namely the Modern and the Traditional. The first manifested as a gradient of parting from the principles of the latter, as seen in the previous chapter. As the introduction of this chapter already hinted upon, it is the loss of urbanity and value throughout the gradient of departure from the traditional point of view that is Modernism and how to deal with this when redeveloping these areas that starts to become the problem at hand in need for a theory or approach for the development of these existing and future planned areas in our cities today. As Klasander exemplifies in her paper "*Challenges of the Modern Urban Landscape*" (2013), various approaches towards dealing with these malfunctional districts of Urban Tissue created in the 20th century and left behind as legacy in our cities have been tried, with greatly varying results. Together with the observations made by Tasan-Kok (2014), the two

define that the main approach necessary is the alteration in the spatial components of the Urban Tissue. As stated before the Modern movement has brought along great advancements, something already denoted by Sitte (1889) when examining the predecessor of the Modern movement, Modernity, and as the previous chapter showcased, the plans of the 20th century were a departure from the values attributed to the Traditional Urban Tissue but not a complete negation of all of these values. Stating thusly that all things Modern would be 'bad' or 'wrong' and all would be wholly replaced by all things traditional as these would be 'good' or 'right' in regards of the approach towards the Urban Tissue would thusly be a very blunt and limited observation of the problem at hand. It would be misleading and most of all form very little of a base for a normative theory to deal with the legacy that the Modern period has left us. As observing the Modern-Traditional discrepancy in such a way would mean that all things constructed and all Tissues designed and erected between 1920 and 1972 would be of little or no value and would automatically be qualified as 'bad', merely based on its year of design or realization.

Any theory regarding the Urban Form and Urban Tissue of the contemporary city faces itself with the presence of both of these approaches towards the tissue within the city at hand, and thusly so does this approach. Specifically in Europe, many cities can be found with major areas of Modern design and treatment of the Urban Tissue that is in desperate need of renewal, while at the same time the city is confronted with growth that requires the development of new areas. It is thusly necessary to uphold a different base for the definition of Good and Bad in regard to theory on the creation of good Urban Tissue in the contemporary European city, one that is applicable both on the redevelopment of existing spatial structures and in the development of new spatial structures. Regarding the works of Conzen (1975), Rowe (1978), Barke (2018) and Talen & Ellis (2002), it would make sense to base such an approach in regard of coping with these challenges at hand, on the model of the city as an organism, as advocated in the section "*Introducing Urban Tissue*" of the second chapter of this book. As stated before, the incentive towards determining those qualities that are valued in the Traditional European Urban Forms and Tissues is the work "*Good City Form*" by Kevin Lynch (1981), as it forms a good base for defining what is good and what is bad in regard of the normative theory of the Organic Model.

DEFINING "GOOD" AND "BAD" TISSUE

As seen in chapter two "*The Importance of Urban Form and the Introduction of Urban Tissue & Morphology*", the city and Urban Form can be viewed as a living organism. This observation forms the core of the normative theory of the Organic Model. This theory follows the notion that if a city is an organism, then it has some characteristic features that attributable to living creatures. On the basis of this assumption it is argued in chapter two, in line with observations of Conzen (1974), Alexander (1973), Rossi (1966), Rowe (1978) and others that it is the Urban Tissue that is an essential part of this theory. It is in the organic approach of the Urban Form through its Tissue that the Organic normative theory can be built up. The organism which the city is compared with in this sense, according to Lynch (1981), is an autonomous individual with a definite boundary. It does not change size, simply through extension, swelling or limitless adding of parts but reorganizes its form as it changes size, reaches its limits or thresholds. While it has a sharp external boundary it is not so easy to be divided internally. It has differentiated parts, but these parts are in close contact with each other and are not necessarily sharply bounded. They work together and influence one another subtly. Each part plays a different role as they are not of equal kind nor are they repetitive. Though similar in Urban Tissue, these parts are diverse and complementary. Form and function are indissolubly linked and the functioning of the whole is complex and not understandable through mere knowing of the nature of its individual parts. The parts functioning together are of quite different result than the mere sum of the parts. The organic model is about the intimate scale, about a balance of built and unbuilt and the interaction of the diverse parts of the city in the creation of a whole within a recognizable and defined boundary. It is what Christopher Alexander, in his work "*Notes on the Synthesis of Form*" (1973), refers to as the internal coherence of the ensemble. Alexander states that this internal coherence depends on a variety of dimensions and that in a perfect coherent ensemble all parts are of equal quality. It is in his eyes then the task of the designer to create order in the ensemble in a way to prevent the creation of 'bad' parts. In order to prevent the creation of 'bad' tissue it must first be clear what this 'bad' tissue is. As Alexander (1973) observes, 'bad' and 'good' are two sides of the same coin and are expressed in terms of one another. To define whatever is 'bad' Tissue it must then also be clear what is 'good' Tissue. This then brings us back to the question "What is 'Good' Tissue?"

As argued in chapter 2, the Form of the city is inscribed in and described by the Urban Tissue. Those values applicable to the normative theory

in regard of the Urban Form would thusly also be applicable to the Urban Tissue and the aspects that constitute the Morphology of these Urban Tissues, as defined by Kropf and Trancik. In his quest to answer the question of 'good' and 'bad' in regards of Urban Form, Lynch (1981) distinguishes five dimensions of performance that can be applied to the valuation of the configuration of Urban Tissue as well. These dimensions of performance are brought down to Vitality, Sense, Fit, Access, and Control.

Vitality can be seen as the degree as to which the Tissue supports the vital functions, biological requirements and capabilities of human beings. Lynch defines the major component of vitality as the ability to protect the survival of the inhabitants. In this case it would thusly mean the capability of the Tissue to protect those who reside in it. It is the Urban Tissue that impacts the day-to-day lives of its inhabitants and that builds a relationship with them. It is the Tissue that impacts the behavior of the people in it and the way they feel within that space. Lynch states in his 1960 work "*Image of the City*" about these feelings that the shape the Urban Form or Tissue takes on forms a psychological influence, and that sense of recognition is of vital emotional and psychological importance for the individual. The Tissue, through proper dimensioning and balance of Figure and Ground must serve the inhabitant through offering a sense of emotional security in order to heighten the potential depth and intensity of the experience of the city and the pleasantness of the Tissue (Lynch 1960). This sense of emotional security is part of what makes up the total of the dimension of Vitality. Formally Lynch (1981) defines the components that make up Vitality are Sustenance, Safety and Consonance. In regard of examining the Urban Tissue as a core answer to the question 'What makes a Good City?', it is specifically Consonance and to a certain extent Safety that is of importance to assess the value of said Tissue. As Sustenance is about the adequateness of basic needs such as access to food and water, it is of lesser influence to the physical manifestation of the Urban Tissue. Safety considers the sense of psychological safety, the social safety and physical safety as experienced when present in the Urban Tissue. A good Urban Tissue according to Lynch is that where hazards and a sense of threat are absent or controlled and the fear of encountering them is low. This aspect for a great deal reflects back on the relationship between the Figure and Ground, specifically on the amount and dimension of open space within the Urban Tissue. As the Ground becomes an aspect that is no longer controlled by the Figure it obtains a state of vagueness and ambiguity, losing its functional and spatial character, becoming voids or no-mans-land (Klasander 2013). When this is the case the sense of Safety can no longer be sustained

by the Urban Tissue, as the open field, primitively, forms a threat as it is a source of danger and unwanted encounters. A proper ratio and understandable relationship between Figure and Ground in which the latter is defined and controlled by the first is thusly of key importance in order to sustain the sense of Safety and create a tissue that is of good Vitality. The second element that constitutes the degree of Vitality of the Urban Tissue is that of Consonance. This feature of Vitality is defined by Lynch (1981) as the degree to which the spatial environment agrees with or is at harmony with the basic biological structure of the human being. Key aspects of this, according to Lynch, are the support of the natural rhythm and the ability to provide optimum sensory input. This can be regarded as one of the core features of the idea of approaching the Urban Form and the Urban Tissue as part of that through means of the Organic Model. In the Urban Tissue this applies to the dimensioning and patterning of streets in order to encourage active use of the body and the human scale in regard to the built form of the Figure-Ground in order to keep in touch with the basic biological structure of the human being. In short the Vitality component of the Urban Tissue is about the avoidance of undefined space and a proper relationship of the Figure and Ground, specifically the relationship between the building and the street and the size of the building and the plot. Defining the space through the built form and assuring a proper relationship between built form and street and keeping a human scale in parceling and built form assures the creation of a good Urban Tissue in regard of the performance dimension that is Vitality.

The second dimension of performance that Lynch (1981) defines is Sense. This is the degree to which the settlement, or in this case the Urban Tissue, can be clearly perceived and structured in time and space by those who reside in it. It encompasses the ease and degree to which a mental structure that one makes of the city connects with their values and concepts. In short, Lynch defines it as the match between the built environment, our sensory and mental capabilities and our cultural constructs. This can be brought back to the observations of Conzen (1978) in which the Urban Form and Urban Tissue are defined as direct products of the human value and ambition of the citizens. The Tissue in this sense is the objectivation of the human spirit and thusly forms a key role in how we perceive the city and relate to it. It is linked to the economic and cultural determinants of the production of the city and the life of its inhabitants (Panerai 1977). The Urban Form and the Urban Tissue and their spatial configuration reflect and condition the social relations of the inhabitants (Dear 1986). It is the possibility of the citizen to organize his city into a coherent pattern and the ability to grasp a sense of an over-all pattern of the Urban Tissue that makes

up the city (Lynch 1960). In *“Good City Form”* (1981), Lynch defines a set of five characteristics that determine whether a City Form is good or bad in regard of the performance dimension Sense. Of these five characteristics three are applicable and of importance to the valuation of Urban Tissue. These three characteristics are Identity, Structure and Legibility. Identity as a characteristic of the Tissue can be seen as the ability to which one can recognize a space as being distinct from other spaces and having a unique character of its own. In relation to the theory of Roger Trancik (1986), this can be interpreted as the final layer of morphology, that which makes a space a Place. This is the component that addresses the cultural and historical context of the Tissue and is obtained through the reception of contextual meaning that comes from cultural or regional content (Trancik 1986). It is shaped through the tangible and the intangible and shapes daily life through the meaningfulness that it gives to spaces within the Urban Tissue. Structure is concerned for a great deal with the very core of the prospect of Sense namely that of positioning of the individual within the Urban Tissue and that of positioning the Urban Tissue within the Urban Form. It is at the small scale the sense of how the parts fit together, of how the ensemble of the Urban Form is constituted and at the large scale the orientation of the individual within the city. Structure can, in this sense, within the approach of Trancik be defined as the Linkage component of Morphology. It bases itself on lines formed by streets, viewpoints, sequences of spaces and other elements that physically connect areas in and parts of the Urban Form. The structuring of the city is about the interpretation of the Urban Tissue and the Urban Form and the clarity and ease at which this can be done by the interpreter. A proper interplay of the five principles of environmental elements as defined by Lynch in *“Image of the City”* (1960) creates a Tissue that can be deemed ‘good’ on the basis of this component. The structuring of Urban Tissue through clear paths and edges, clarity in distribution and grouping of landmarks, links between the various nodes within the Tissue and distinct characteristics in districts assure a good structure of Urban Tissue. The third and final characteristic of Sense is Legibility. Legibility ties together the characteristics of Identity and Structure, as it is concerned with the ability of the inhabitants to accurately communicate to one another through the various symbolic physical features of the Urban Tissue (Lynch 1981). This is rooted in both the formal and the informal and the tangible and intangible, varying from flags to gates and senses of private and public through walls, columns and sequences of space. A good Urban Tissue in regards of the performance dimension Sense is thusly concerned mostly with the Place and Linkage levels of Morphology and are for a major part about the recognizability, readability and interpretability of the Urban Tissue as a

distinct and vivid characteristic of the Urban Form. Good Urban Tissue thusly constitutes and shapes the relationship that the inhabitant has with the city and lets the inhabitant identify his or herself to the city. It allows the inhabitant to place him or herself within the Tissue and the Form and helps the interpreter make sense of the spaces around him and the role that the space and the individual within the Urban Tissue have within the greater ensemble that is the Urban Form of the city.

The third dimension of performance is defined as Fit. The dimension of Fit deals with the degree to which the form and capacity of space matches the pattern and quantity of actions that people engage or want to engage in. It addresses the matter in which the spatial configuration matches the behavior of its inhabitants and the ability to adapt and comfort for these patterns of actions. These 'patterns of actions' can be interpreted as patterns of movements, as that is the major and most common use of public space (Klasander 2013). The quality of a good Urban Tissue regarding this performance dimension lies in the mixing of and exchanges and encounters regarding the economic, the cultural and social. Klasander defines this as the spatial quality that is urbanity and can be measured as the Movement Economy of a city. In a good Urban Tissue, Klasander (2013) states, points of origin and destination are spread out and movement is roughly spread out throughout the entire tissue and each individual trip passes through a range of spaces along the way. As these spaces are subjected to this stream of movement they become the by-product of said movement. Because of this usage in the patterns of movement a change in usage of that space tends to come about. This is the reason why commercial or recreational functions such as shops and cafés are established on sites that are frequented a lot within this net of movement. As the patterns of movement tend to result in changes of land-use, this would mean that Fit requires a certain factor of adaptability. Lynch (1981) defines this degree of adaptability along two scales; Manipulability and Reversibility. The first, Manipulability considers the extent to which the Tissue can be changed in its use or form. Panerai (1977) defines this as the degree of openness to change of the Tissue. Important aspects within this are the distinctiveness of a space, as addressed in the perimeter Sense, and the proximity of these distinct spaces. Within space syntax the proximity, or the distance from each individual space to all other spaces within the Urban Tissue is defined as the Spatial Integration. The more integrated the space within the Tissue is, thusly the more defined and in close proximities to one another, the better the Tissue functions regarding the Fit. The concept of Spatial Integration influences not only Fit but also the fourth dimension of performance defined by Lynch, namely Access. Spatial Integration is dependent on size, density and

distribution (Klasander 2013). The second aspect of adaptability is defined as Reversibility or perhaps rather Resilience. This aspect refers to the avoidance of future dead ends within the Urban Tissue, ensuring a Fit not only for the current status of the inhabitants and the society, but also for the future. This is mainly focused around the dimensioning and form of space, allowing for excess capacity within the Tissue and room to grow and expand or densify. Fit, or even more detailed, Good Fit, is an aspect that is addressed by Christopher Alexander in his work *“Notes on the Synthesis of Form”* (1973) as well. Alexander defines it as a desired property of the ensemble that is the Urban Tissue. Though primarily thought up by Alexander in regard of context and object, the analysis made is still applicable to the views that Lynch upholds in regard to Fit. As Alexander states; the example of Fit is best found in the Suit-and-Tie-Metaphor. A certain suit in itself might look good, in this case a certain iteration of the Urban Tissue, and a certain tie in itself might look good, in this case a high level of spatial integration, yet the combination of the tie and the suit might not look good at all. Certain suits do better with certain ties and vice versa. The sense of Fit thusly does not apply only to having both a good Urban Tissue and a good spatial integration, but a good interplay of both aspects. One influences the goodness of the other. As the suit might devalue the tie and the tie might devalue the suit, the Urban Tissue can be devaluated through the spatial integration and the spatial integration can be devaluated through the Urban Tissue. It is the coherence of the two and the interplay of the two that, in regard of Fit is ultimately of interest in defining what is ‘good’ Urban Tissue in this sense. Good Fit is the meeting of the demands that the two aspects make on one another (Alexander 1973).

Lynch (1981) defines Access as the fourth dimension of performance. He defines this as the ability to reach other persons, activities, resources and places including the quantity and diversity of the elements that can be reached by the inhabitant of the Tissue. It is thusly highly related to the sense of Fit, especially the aspect of Space Syntax and Spatial Integration. According to Lynch, the Tissue would be a ‘good’ Tissue, if it would afford obvious and easy access to a moderate variety of people and spaces and that this variety can be expanded if the inhabitant is prepared to put more effort or energy into accessing this wider variety. It is good access that allows for the thriving of commercial activities and thusly beneficially influences the spatial integration (Klasander 2013). A good Tissue in the eyes of Klasander is then a Tissue where there is space for optional explorative patterns due to a high level of access. These optional explorative patterns account for the by-product of movement, increasing thusly the spatial integration and thusly beneficially influencing pattern of movement. It is then the adaptability

of the tissue that ensures a good Fit not only for the current situation but also for the future of the city and its inhabitants. On a smaller scale Access can be examined as points of access or accessibility of the Figure from the Ground. In space syntax the Ground is considered a constituted space when it offers accesspoints to the Figure. It is constituted space that is highly susceptible and suited for change (Klasander 2013). This results in the fact that the higher the level of constitution of spaces within the Urban Tissue, the more adaptable it is, creating a better Fit. The more open the Urban Tissue is, or the smaller the role of the Figure in the Figure-Ground, the less constituted the space within the Tissue is. This makes the Tissue less susceptible for the by-products of the patterns of movement and show less susceptibility for change. The higher the permeability of the Figure in regard to the Ground the greater the level of constitution of the space. A Figure-Ground in which the Figure defines the Ground and public space is addressed with access points to the Figure from the Ground results in the creation of an Urban Tissue that can be qualified as 'good' not only in terms of Access but also in terms of Fit. The two concepts can thusly be seen as highly interdependent and must not be addressed separately from one another as Tissue is examined on the basis of patterns of movement.

Lastly Lynch defines Control as the fifth dimension of performance. It addresses the degree to which the use and access to spaces and activities are controlled by those who use, work or reside in the Urban Tissue. Control encompasses spatial rights; the right of ownership, the right of use, right of presence and right of modification . Three characteristics are of influence on the level of control, namely Congruence, Responsibility and Certainty. Congruence is defined by Lynch as the extent to which the inhabitant of a space controls it, in proportion to their stake in it. This characteristic is thusly one that is of great influence on the sense of security within and the sense of fit of the Urban Tissue. Clarity in the Tissue as a product of defined spaces, a Ground, that are to be experienced as 'carved' from the built form, the Figure, is a trait that ensures and important sense of (emotional) security (Lynch 1960). In addition, following the definition of Congruence there also should be a certain degree to which the inhabitant of a clear and defined Tissue has control or experiences control over it. This can be achieved through emotional ties that relate the inhabitant to these clearly defined spaces within the Tissue he or she inhabits. It touches upon the scale of private, semi-private, semi-public and public that is present in the traditional approach of Tissue and at the same time touches upon a more emotional sense of controlling the space. This latter is one that is not encompassed in property rights or right of ownership but is can be found within the

can not only be constituted through this tangible component only. As Schulz (1979) states, it is the intangible, the associations one has with space, that are of great importance to constitute the relationship that an individual forms with the space he or she occupies. When a space lacks either one of these it becomes hard to form this relationship and thusly hard to constitute a sense of Responsibility for the space. As Klasander (2013) indicates, as spaces become ambiguous and vague in their functional and spatial character, they no longer are experienced as the spaces we identify with, such as courtyards, streets and squares, but in turn become voids and no mans land, which etymologically already gives away a lacking sense of Responsibility. At the same time if the tangible is there but the intangible component lacks, it is hard for one to build a proper relationship with. It is, as Schulz (1979) defines the 'spirit of the place' that one deals with in the day-to-day usage of spaces within the Tissue. It is the intangible, cultural and social contextual component that generates the emotional attachment to a certain space, a vital component in generating a sense of Responsibility in regard to that space. The final characteristic that influences Control as defined by Lynch (1981) is Certainty. This characteristic caters the degree to which people understand the control system that is in place within the tissue and feel secure with this system. It addresses the consensus of spatial rights and who is in power and truly responsible for the space that is dealt with. As Responsibility addresses the emotional and psychological sense of 'feeling' responsible, it is Certainty that deals with the ease and confidence one has with those who truly are responsible for the space in the Tissue. This once again relies on a clarity of the public and private realm, the clarity of the space and the clarity of ownership. Again, it is the void that brings uncertainty as it is unclear as to who is responsible for those spaces. As with Responsibility, Certainty is created through both a tangible and an intangible component. The tangible component is that of size, elevation and spatial distancing through the creation of barriers, directional movement, and points of access defining a clear, bounded space. The intangible component of Certainty relies on symbols and the symbolic impact of the previously mentioned tangible components. Landmarks, hierarchy and the display of symbols bring a sense of certainty as it constitutes and clarifies who is truly in Control. As Lynch (1981) states, it is the physical, the tangible that needs to be matched with the social conventions, the intangible. This manifestation of social conventions and order brings a degree of Certainty to those who make use of and reside in the Urban Tissue.

In short Good Urban Tissue thusly relies on scoring well on the five dimensions of performance; Vitality, Sense, Fit, Access and Control. In practice this means that for a Tissue to be experienced as a 'Good'

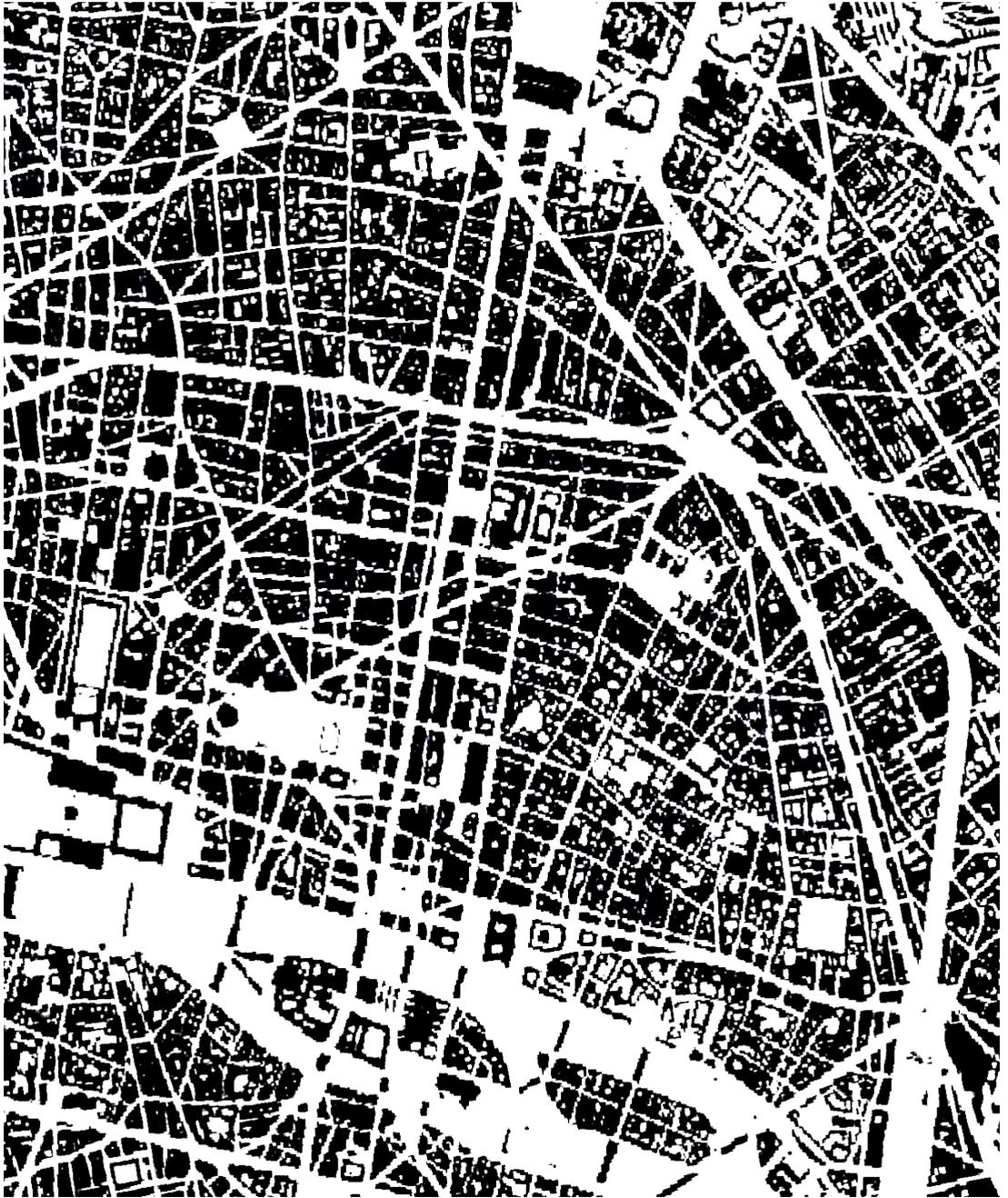


Figure 4.3: Healthy Tissue as visible in Paris, the situation Le Corbusier designed "Plan Voisin" for.

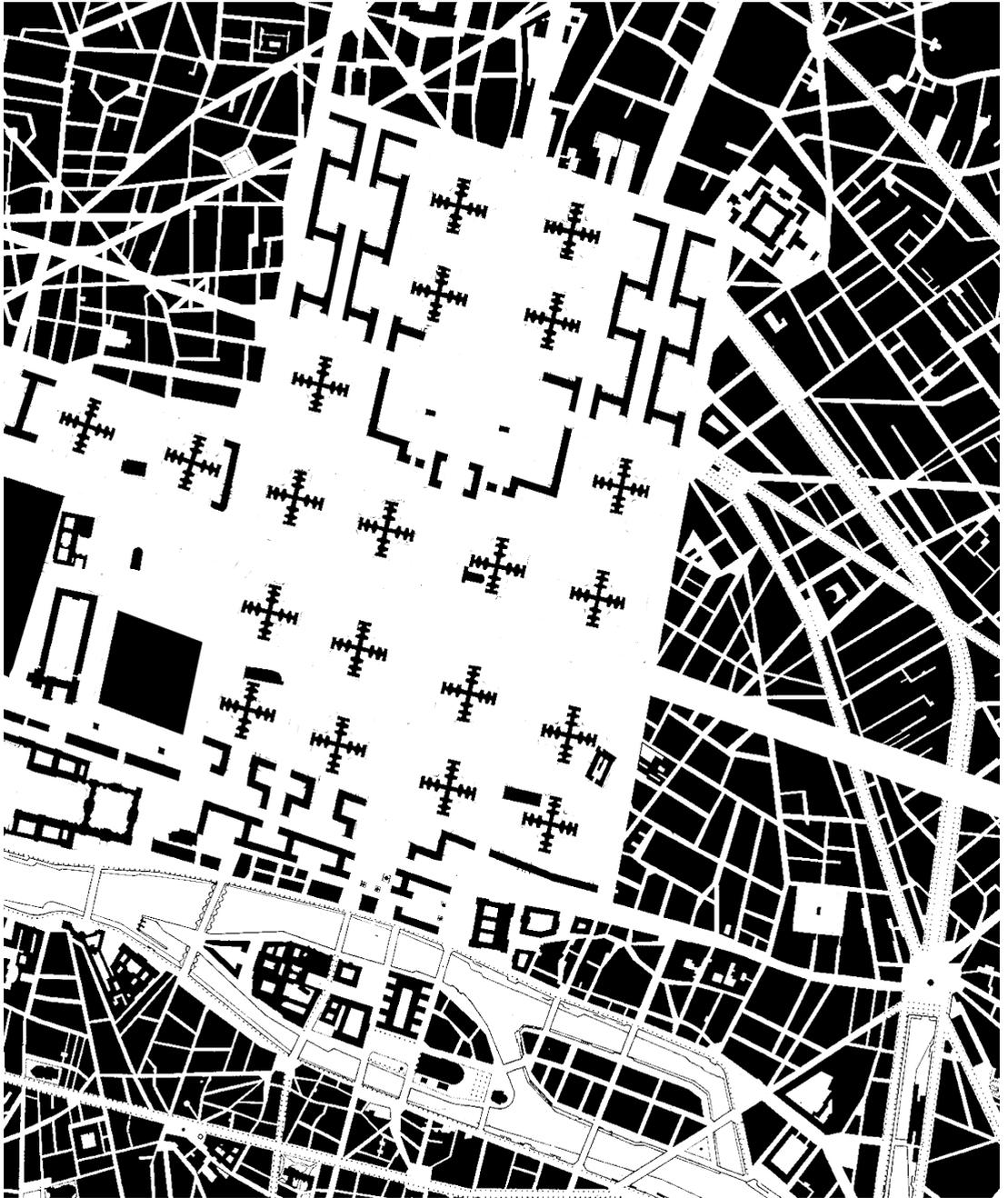


Figure 4.4: Damaged Tissue in Paris; the Plan Voisin as projected by Le Corbusier on the previously healthy Tissue

Tissue, it needs to cater these dimensions through various components of which some are tangible and others are of a more intangible nature. What is recurrent amongst all these dimensions is the necessity for a clear definition of the space (Ground) in regard to the built form (Figure). A sense of physical, social and psychological safety is experienced within an Urban Tissue that caters the human dimension within space and avoids large open spaces within it. The dimensioning and patterning of the Ground in a Good Urban Tissue is one that supports the natural rhythm and is at harmony with the basic biological structure and needs of the inhabitant. It is thusly the Organic Model that forms a core for a Good Urban Tissue. Once again this touches upon the avoidance of undefined spaces and a proper relationship between the Figure and the Ground, specifically the relationship between the street and the built form and the sizes of the buildings and plots within the Tissue. A Good Urban Tissue is not only one that constitutes clarity, it is one that brings forth a sense of identity that is dealt with through the creation of Place, and the links between these Places within the Tissue through the structuring of space. On top of this the Urban Tissue is one that facilitates the mixture and exchange of encounters on economic, cultural and social level. This can be obtained through a high Spatial Integration, resulting in a high Movement Economy. An Organic, fine-grained Tissue is one that facilitates explorative movement within itself. It is within this Tissue that a sense of clarity between the public and the private realm is necessary and that the two are in a perceptible relationship with one another through the constitution of the public space. All in all a Good Tissue is then one that is in nature part of the Organic Model, fine-grained, with clearly defined, constituted spaces with a human scale, and in which a perceptible relationship between building and street, plot and building and public and private realm is present.

INTRODUCING SCARRED TISSUE

As discussed in chapter two of this book, the Urban Form can be seen, and often is seen, as a living organism. Within this analogy it is that one speaks thusly of Urban Tissue rather than Urban Fabric, which in turn attributes characteristics to the Urban Tissue that are reminiscent and analogous to characteristics of the Tissue of an Organism. It is in such a fashion that by keeping true to this analogy, the Urban Tissue is to be examined. This would mean that stating that the opposite of a 'Good' or 'healthy' Tissue is one that is a 'Bad' or 'sick' Tissue, a notion that notoriously was adopted by Le Corbusier in describing Paris, would be of a blunt nature. A notion that, in the context of the Organic Model

is perhaps of more fitting nature is that of 'Damaged' Tissue. As Lynch (1981) states, the organism is dynamic but one that is a homeostatic dynamism: internal adjustments tend to want to return the organism to some balanced state whenever disturbed by an outside force. Such an outside force can be defined as interventions within or additions to the Tissue that break with those parts of the Tissue that can be defined as 'Good', in essence causing a rupture, a breakage, or perhaps even a trauma to the Tissue. It can be compared to a trauma to living organic Tissue; a wound. As with wounds in organic Tissue these wounds in the Urban Tissue are of a various degree of damage to the Tissue as whole; the Urban Form. This degree of damage can be reflected in two components that characterize the impact of a wound in organic Tissue; the size of the wound, or in this case the surface of this 'damaged' Urban Tissue and the depth of the wound, or in this case how far it deviates from 'Good' Urban Tissue in regard to the five performance dimensions for Good Tissue. As Lynch (1981) states; like the Tissue of the living organism, the Urban Tissue is capable of repair, and as showcased in the previous chapter, even those Tissues furthest distant from what is qualified according to Lynch's perimeters as 'Good' or 'Healthy', still harness some qualities that can serve as a base towards improving these tissues. They are thusly not 'Bad' tissues, but in essence 'Damaged'. These areas can be seen as a wound within the Urban Tissue and, like a wound in an organism, it is not a permanent state and can be healed back within the tissue, depending on the impact that the intervention has inflicted upon the Tissue. In line with the observation of Lynch in regard to the homeostatic dynamism of the Urban Tissue, it can be deemed as in search of repair of its damaged parts. As interventions within the Urban Tissue, as with wounds, are too big or too deviating from the surrounding Tissues the process of healing or repairing becomes harder and takes more effort. Too big or too deep wounds in the Urban Tissue damage the coherence of the Tissue and the relation that is observable amongst it.

A categorical example of a large and deep wound in Urban Tissue is, ironically, the Plan Voisin (1925), a solution proposed to fix the 'sick Paris' as observed by Le Corbusier. Due to the sheer size of the project and the non-traditional approach to the Urban Tissue and thusly the performance dimensions as defined prior, the relationship between the existing Tissue on either side of the intervention becomes less noticeable or even non experienceable. In addition to this the 'wound' is one of a very deep nature due to the approach towards the tissue that Le Corbusier applies; the direct relationship between building and street and building and plot is lost. Within the previously defined streets and squares system that is the traditional Tissue of Paris, an open void

is introduced through this plan. As in this case the wound is large and deep and the relationship between the edges of the wound is lost, it is of almost impossible nature to fully heal this broken tissue and return it to its prior state. The pitfall namely of observing Tissue as something that can be healed, as defined by Lynch (1981) is to think of the city as one that has a Tissue which can be improved and fixed through cutting out entire parts of the Tissue and replacing it with a Tissue deemed more suitable, an act executed by Le Corbusier in his creation of the Plan Voisin. If the Plan Voisin had been executed, healing this part of Paris would thusly not be achieved through demolishing the entire site and reintroducing the previous Tissue as that would be of a nature contradictory to the observations made prior. This newly created Tissue needs to be approached thusly in a different fashion, and to do so perhaps a different observation and classification of this Tissue might be of hand.

As defined in the previous chapter, the many iterations of the Modern approach towards the Tissue have showcased a multitude of outcomes in regard to Morphology. Stating that all of these are 'Bad' forms of Tissue and unfitting for a coherent European City with a clear Form would be too blunt and would ignore all the qualities that the Modern approach has brought, already noted by Sitte (1889) during the rise of modernity. Each of these iterations harbor some kind of quality that is of essence to 'Good' Tissue and relates in some way still to the basis of 'Good' Tissue. Perhaps not directly visible in all resolutions of the Figure-Ground but certainly present as noted in the various examples examined previously. The internal coherence of such an ensemble, as Alexander states in his *"Notes on the Synthesis of Form"* (1973), depends on the net of adaptations and the functioning of the ensemble as a whole, it is the context that puts demand on the form. If the Modern approach towards the Tissue is seen as one where damage is inflicted upon the traditional Tissue in a manner that can be typified as the slashing of a wound, and the notion is adopted that the Urban Tissue is of an organic nature, capable of healing itself (Lynch 1981), it must then be seen as part of this Tissue, though not necessarily functioning as the intact, or 'Good' Tissue. Adaptations to this damaged Tissue, as Alexander speaks of, can then be regarded as something of a different nature namely as part of a healing process. Similarly to the healing of an organic wound, this newly adapted Tissue can be viewed as 'Scarred Tissue'.

Scarred Tissue occurs when the Tissue is in its process of healing, when new Tissue is attempted to be made within the existing context, in order to heal the wound or perforation that was inflicted upon the previously intact Tissue. As with the organic Tissue it thusly forms when

it is damaged and tries to mend this. In this process this new Tissue however becomes one that is of a different texture and quality than the surrounding Tissue yet does try to find affiliation with the surrounding Tissue, trying to close off and heal the wound or inflicted damage. This notion is one that is of a much more accepting ground than the tabula rasa approach or as Lynch (1981) states in regard to the Organic Model, one that deals with a group of concepts whose primary values are continuity and well-functioning. Although, similar to a scar in organic Tissue, Scarred Tissue can not be completely removed, its appearance can be improved to a certain extent. One can minimize the visibility and experienceability of the transition between the Scarred Tissue and its context, but never can fully get rid of it, nor must one aim to achieve this. Some traces of the previously done damage to the Tissue will always remain visible, an aspect one must thusly not deem as a failure when trying to improve this damaged Tissue. Its traces, just like scars in the organic Tissue, are the evidence of an event or notion that inflicted the damage in the first place. Fully getting rid of these traces would be denouncing that the damage has been inflicted in the first place. Completely getting rid of Tissue that was created through a Modern approach would be brushing up or denying the course of history that has run its way through our cities. As Christopher Wilk, former curator of MoMA, stated: "We live in an era that still identifies itself in terms of modernism. It is simply not possible to work in ignorance of the most powerful force in the creation of 20th century culture". In short, one can mend damaged Tissue up to a certain degree through an approach of this Tissue on the basis of the dimensions of performance as laid down by Lynch (1981). This 'mending' is concerned with the lessening of the visibility and impact of the damage that has been inflicted upon the Tissue without ignoring the development that has occurred and thusly results in the creation of Scarred Tissue. The success of this Scarred Tissue is then dependent on the connection it makes with the contextual tissue and the scoring in regard of the previously mentioned performance dimensions resulting in a lower visibility and smoothness of transition between the contextual Tissue and the Tissue that is to be dealt with.

DESIGNING FOR THE EUROPEAN CITY - GROWTH OF NEW AND REGENERATED TISSUE

As stated earlier in this chapter, the European city of today is facing a twofold of problems that is to be designed for; the regeneration of existing Urban Tissues in areas that are malfunctioning or tormented with troubles and simultaneously a growth that does not seem to halt soon and thusly requires the creation of new, added Urban Tissue. In the second chapter of this research the core value this research,

to define a base or an approach for the design of Urban Tissue that continues the values and the design of Urban Tissues and Morphological traits attributed to the Urban Forms of the Traditional European City was elaborated upon. Combining that with the challenges set for the European City and the values and characteristics that can be attributed to or aide in the creation of Good functioning Urban Tissue offers then a framework or an approach that can be adopted both in the regenerating of the Urban districts that are to be redesigned and in the creation of new Urban Tissue in order to cope with the ongoing expansion of the European city, without the loss of urbanity and the values and characteristics often attributed to these cities and their respective spatial configurations and Urban Forms, Tissues and Morphology. In line with the previous examinations and observations throughout this and the previous chapter, the core of this approach is of a spatial nature. Focussing on the spatial characteristics that attribute to a positive development of a diverse and thriving Urban Tissue that is comparable and complimentary to the existing European city. Following the core notions of Trancik and Kropf, combined with the observations of Lynch, a framework can be drafted with a clear base in morphology and Urban Tissue configurations that deals with the configuration of the Res Economica component that Krier (2009) and, in other terminology Rossi (1966), define for the creation of a good and function piece of Urban Tissue that positions itself as an integral part of the Urban Form of the European City.

RES PUBLICA AS ELEMENT OF VITALITY AND STRUCTURE

Thusfar this research has dealt with the basis of the approach for Morphological development of Urban Tissue as defined by Roger Trancik (1986) namely the Figure-Ground in addition to the larger schemes that have been discussed in light of the Urban Form. Simultaneously, the previous chapter has dealt with the perimeters that are to be taken into account in the development of healthy, thriving, functioning Urban Tissues. It is amongst these perimeters that the second component of the making of Urban Tissue as defined previously in chapter two comes into play; the Res Publica. Various authors and theorists have dedicated works to the public or the vital functions of the city and thusly various definitions have been created in defining what these actually encompass. In order to discuss their importance in this research as well, it is key to define what exactly is meant with the Res Publica and what it encompasses.

The start of defining the Res Publica is sought for in the definition as set out in *"The Architecture of Community"* by Leon Krier (2009) when he defined the two main components of the Urban Tissue as the Res Economica and the Res Publica. In this, Krier defines the Res Publica as the Monuments without the streets and the squares but simultaneously distinguishes between the public, symbolic and institutional buildings in the Res Publica and the private activities of housing, commerce and industry in the Res Economica. It is already in these two different notions that one can argue that a sense of unclarity is eminent, since, as Aldo Rossi states in the very first chapter of his *"Architecture of the City"* (1966) not every public building or institutional building is a monument and not every monument is of public nature. But what then is the Res Publica in the definition of Aldo Rossi? In *"Architecture of the City"*, Rossi recognizes a similar twofold division of elements that together constitute Urban Tissue; the dwelling and the primary element. The primary element in Rossi's definition derives from Milizia's definition of separation between public and private property and, results thusly in a widening of the scope of the Res Publica that Krier offered. The primary element, or Res Publica according to Rossi is thusly not only the monument, and is not a fixed activity. As a matter of fact Rossi continues to further define what, in his eyes then does define the element of the

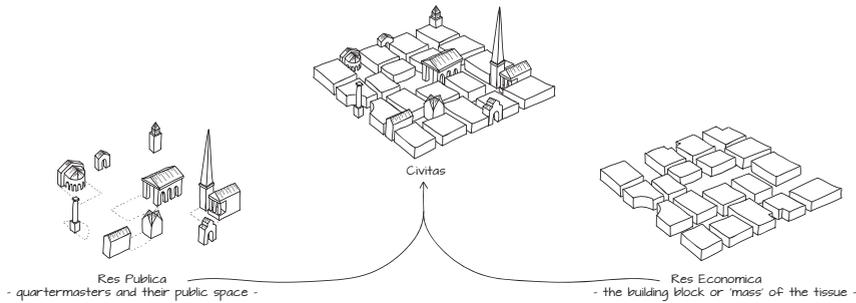


Figure 5.1: Defining the Two components that make the city; Res Economica and Res Publica (Adaption of drawing by Leon Krier (2009)).

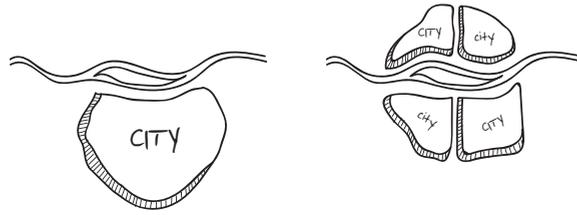
Res Publica. In his subsection 'The Primary Element' of *Architecture of the City*, Rossi namely defines the primary element, the core of the Res Publica, as "those elements capable of accelerating the process of urbanization" in a city. He recognizes the elements in the Res Publica as being of a dominant nature and participating in the evolution of the city over time in a permanent way, which in turns results them in being identified with the major artifacts in constituting the Urban Tissue and the Urban Form of the city. It is specifically in that nature of the elements within the Res Publica as accelerator or steering in the process of urbanization and the forming of Urban Tissue and spatial configurations that Esther Gramsbergen (2014) conducted research, in which she continues on the definitions that Rossi introduces. They are elements that pave the way for further development of the Urban Tissue, and in that role, as defined by Gramsbergen can be seen as so-called Quartermasters. They are, in the words of Rossi and echoed by Gramsbergen, distinguishable elements on the basis of their form and their exceptional nature within the urban fabric and are characteristic, or perhaps better, that which characterizes the city. Combining the observations of these three authors brings together perhaps the most elaborate definition of this special group of elements within the Urban Tissue of the city. In doing so one can conclude that the Res Publica is the counterpart of the Res Economica and is comprised of those elements that are capable of starting and accelerating the process of urbanization, and influence the structuring of the Urban Tissue and Urban Form of the city and form spatial moments within the Urban Tissue of economic, social or cultural relevance. This thusly means that, as also noted by Rossi (1966), it is not solely the public building but also the public square that is part of the Res Publica.

In regard of the perimeters as derived in the previous chapter from *Good City Form* (1981) by Kevin Lynch the Res Publica as defined as above, is of value in both the Sense dimension of performance as well

as the Vitality dimension of performance. The Vitality performance, as stated in the previous chapter, represents the degree to which the form and structure of the settlement support the vital requirements and capabilities of the citizens and combined with the dimension of Access requires is about the ability to reach Urban Elements that supply resources, activities and interaction, in short the dispersal of the Res Publica within the Res Economica. The Sense dimension of performance, represents the perception of the Urban Form and the structure of the Urban tissue. Within this dimension the Res Publica is active in specifically two fields namely in structure, or how places within the Urban Tissue fit together in the larger scheme of the Urban Form, and in addition to this the Identity and Legibility thereof, or the extent to which one recognizes place within the Tissue and how the element within the Res Publica communicates this accurately through its symbolic and physical features. Within this chapter, the role of the Quartermaster elements that constitute the Res Publica are examined in the light of their positioning within the Urban Tissue and Urban Form and thusly their influence on the performance dimension Vitality and the subset of characteristics of the performance dimension of Sense that deals with Structure of the Urban Tissue; the Res Publica as element of Vitality and as element of Structure.

RES PUBLICA AS ELEMENT OF VITALITY

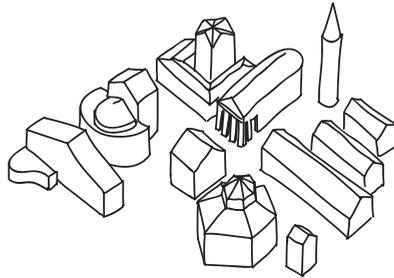
In seeing the Res Publica as counterpart of the Res Economica and examining their spatial relation as an element of Vitality or better stated, as element of the creation of vital or healthy tissue, it can be stated that eventually the positioning of the elements of the Res Publica within the Res Economica and thusly the interplay between public and private realm is of importance. It is what Leon Krier (2009) refers to as the tuning of the Urban Tissue, in which he advocates for the organic integration of the two components. In his work "*The Architecture of Community*" (2009), Krier speaks of the two strategies that can be adopted in the approach for the positioning of the elements of the Res Publica; through zoning and through integration. It is the first that Krier defines as resulting in a product that is an anti-city rather than a city, and though perhaps effective as a means for quick expansion, it is deemed as rudimentary as it is effective. Krier warns for the usage of these elements through zoning as it would, in his eyes, inevitably lead to the breakup of integrated poly-functional city's Urban Form and qualitative Urban Tissues into mono-functional zones that have no sense of vitality as a sole district, quarter or Tissue within the city. Rather, Krier argues, it is the elements of the Res Publica that, through proper dispersal throughout the city's Urban Form and its subsets of



a variable of complete urban tissues



balanced density and composition



dispersal of civic uses → quartermasters
& lively tissue

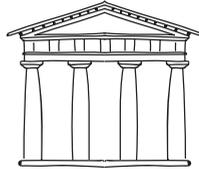
Figure 5.2: The City as an entity of completeness through dispersal rather than zoning (Krier, 2009).

Urban Tissue will result in the creation of a variable number of complete Urban Communities; a continuation of the Traditional European city. The dispersal of these functions ties closely together with the vitality and functioning of certain districts within the grander scheme of the city that is the Urban Form; based on its multifarity and the proximity of use and the dimensional and functional variety within the Urban Tissue. Krier continues on this that the notion of the Traditional city becomes meaningful through the creation of these Urban Communities, subsets of Tissue within the Urban Form, the concept of the Urban Quarter and what each Quarter fulfills in regard of this larger scheme that is the city.

As stated previously, the European city of today is facing two different tasks in regard of Urban Development; that of the generation of new Urban Tissue and the expansion of the Urban Form, and on the other hand the densification and the transformation of existing but malfunction Urban Tissues within the existing Urban Form, a notion already introduced by Harold Carter in *"An Introduction to Urban Historical Geography"* (1982). Both, as stated by Gramsbergen (2014) deal in essence with the restructuring of the existing city and thusly of the Urban Form and within that the Urban Tissues. In both of these developments it is the proper dispersal of the Res Publica within the Res Economica that seems to be of greatest essence. In regard of the creation of new Urban Tissue, Krier draws a parallel, as done similarly in chapter two of this research, between the city and any other living organism. There are certain optimal dimensions, proportions and ratios in regard of what is a vitally functioning subset of Urban Tissues. It is what Lynch (1981) brings forth in regard of Access and Vitality; every part of the city is to be whole and functioning in itself and the interspatial cooperation of these parts constitute the functioning of the city as a whole. Expanding of the city or the creation of new Urban Tissue in regard of the overall idea of the approach that is set out in this research, namely that of expanding through continuation of the city, requires the creation of diverse, mixed-use, Urban Tissue with a proper dispersal of Quartermaster Elements or, stated shortly; a proper balance between the Res Publica and the Res Economica. Similarly in the regeneration of existing, malfunctioning subsets of Urban Tissues within the city it is exactly this balance that is often key or core of the necessary Urban development. Klasander (2013) states of this that the essential quality of Urban Life sprouts from the proper mixing or dispersal of those elements that are part of the Res Publica, specifically mentioning those factors that contribute to economic, cultural and social exchanges amongst citizens within their share of the Urban Tissue of the city. Aside from their role in easing the navigability and clarity of structure of the Urban Tissue, Klasander notes that it is

their use that adds to the vital quality of urbanity that is sought after in the redevelopment of these existing, malfunctioning tissues. The proper dispersal of these elements, according to Klasander, results in a healthy movement economy within the tissue. In a subset of Urban Tissue where proper balance between Res Publica and Res Economica is present and where the elements of the Res Publica are not clustered but properly dispersed throughout the tissue the points of origin and destination are spread out and the movement through the tissue is going roughly from everywhere to everywhere. This results in an Urban Tissue that provides opportunity for movement throughout its entirety and the frequent use of all the spatial configurations and element within it. Urbanity in the sense that Klasander defines, is predominantly about the creation and possibility of encounters, a feature triggered by the proper dispersal of elements that bring these encounters about, elements of the Res Publica.

That the balance and proper dispersal of the elements Res Publica throughout the Res Economica is necessary both in the development of new Urban Tissue and the redevelopment of existing Urban Tissue is of importance is out of the question. What does remain perhaps are then what's and how's as to how this dispersal of elements works, as not every subset of Tissue of the Urban Form or every quarter of the city can have its own Central Railwaystation, its own Town Hall, its own Cathedral or its own Stock Exchange, as these are unique elements that operate at a scale of the entire city or even larger at the entire regional or national level. In this sense it is perhaps helpful to look back at two notions of writers that helped define the notion of the elements of the Res Publica in the beginning of this chapter; Krier and Gramsbergen. Krier looks at the various parts of the city as members of a family in his *"Architecture of Community"* (2009), with the notion that each of the members of the family occupy a certain role within this family. The family in its turn can expand and shrink and roles can change but they are a product of organic growth, they are not clones and members are not duplicated in that sense. If this is seen in the notions of designing for the continuation of the Traditional European city, it is a subset of Urban Tissue within the Urban Form or a quarter within the city that occupies a certain role in the constitution of the city as a whole, or as Krier states it, as a family. Even though every subset of Tissue and every quarter, following Klasander (2013) requires various economic, social and cultural, elements of the Res Publica, not every quarter is the City Center and not every quarter is the outskirt and they thusly require also a specific subset of elements within the Res Publica associated with their role and roleddevelopment within the family of quarters that forms the city as a whole. It is specifically on the development of the quarter



Governance

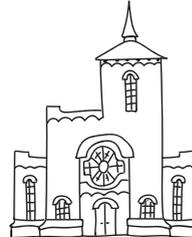


Commerce / Trade

Center Developing



hospice/caring



Congregational

Peripheral Developing



Knowledge Institutes



Parks & Recreation

Quality Enhancing

Figure 5.3: The Categories of Quartermasters as defined by Gramsbergen (2014).

or the subset of Tissue, that Esther Gramsbergen (2014) conducted her research and is of help in defining what specific elements of the Res Publica are attributable to certain required development.

Following the reasoning of Esther Gramsbergen (2013) the role of the Quartermaster can be subdivided into three different categories, namely those that bring forth the capability to trigger development associated with the forming of city centers, those than harness the triggers for development associated with peripheral developing, and those elements that result in quality enhancement of the quarter. These, according to Gramsbergen, are the product that the placement

and realisation of a Quartermaster, or Primary Element can bring as a result in regard of the Urban Tissue that it is projected upon or for. The Quartermaster is to be seen as an institute; the collaboration between form and function. In this chapter however the Quartermaster is merely examined by its nature as a function and positioning within a tissue, its form will be dealt with in the next chapter in regard of the final layer of Trancik's definition of Morphological production; the creation of Place. In the approach of Gramsbergen, the definition of Whitehands' 'Agents of Change' as proposed in his work "*The Making of the Urban Landscape*" (1992) is taken as a base to classify the elements of the Res Publica in commercial and institutional. With institutional, Gramsbergen refers to those organisations that cater societal tasks, following the observations of seventeenth century architect Jean Castex. Following that observation, the institutional component of commerce, is observed by Gramsbergen to be integral part of the category of Institutional Agents of Change. With the institutional component of commerce those institutions are referred to that are of a larger impact on the commercial and economic development of the quarter or city. This thusly does not encompass retail and small-scale individual commercial parties and their physical manifestation within the Urban Tissue, which, following Klasander (2013) and Krier (2009) are of necessity throughout all forms of tissue in order to obtain liveliness. The institutional component of commerce does encompass the larger commercial activities that affect the development of the city and the quarter such as markets, stock exchanges and, a product of the 20th century trade-centers. Following the introduction of the institutional component of commerce into the category of institutions, Gramsbergen defines seven 'original' Urban Institutions that have with them the quality to perform as a Quartermaster a certain task of Tissue and Form development. These functions are: Governance, (Religious) Congregation, Commerce, Health, Knowledge Institutes and Recreation. Each of these have smaller and larger scale iterations and manifestations and have, following the reasoning of Gramsbergen, each their own capacity in regard of either of the three previously defined categories of development.

Amongst those Urban Institutions that Gramsbergen regards as having the capacity to be of Center Developing nature are those institutions of a Commercial or Administrative/Governmental character. It is specifically these that both Gramsbergen (2014) and Rossi (1966) see as those elements that showcase the identity of the city and are closely related to development of the heart of the city. In the past, as stated by Gramsbergen, these used to be closely tied together, manifested not only through their institutional link but oft times also in their physical manifestation. In the south of Europe this could be seen in the early

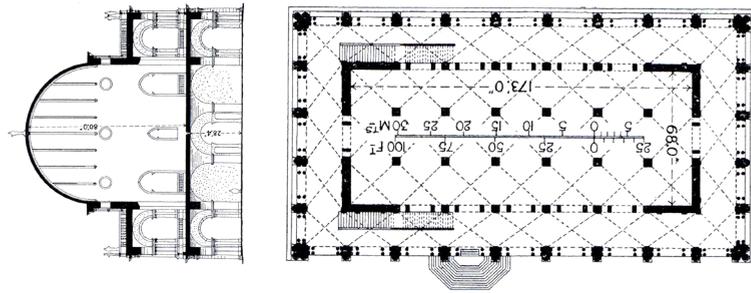


Figure 5.4: The Basilica Vincenza (Drawing by Banister Fletcher (1946)) showing the combination of the institutional components of commerce and governance.

Townhalls with arcades on the groundfloor that formed location for the city's market and in Northern Europe in form of the Belfries often developed on top or adjacent to the meat- or linenhalls of these cities that, aside from the trade halls, often housed the prisons and townhalls. It is later that these two become separate instances that both, still, have the capacity to contribute to the forming of a city center, whilst that of the identity contributor seems to have remained predominantly to those elements of the administrative or the governmental character. These elements still form a recognizable core of the city and the society within it, whilst large commercial institutes bring the liveliness that is associated with the center of a city.

As the European cities develop there is a continuous growth and various forms of expansion. However what is a recurring pattern is the elements of the Res Publica that function as catalysts for this peripheral development. Gramsbergen lists these elements or Urban Institutions as being of a highly social character. They are often of a larger character and thusly search the outskirts to land which, in turn, results in the development of the Res Economica around these, due to their social character. In her division of the Quartermaster Institutes, the Urban Institutes that drive peripheral development are classified specifically as those that are of a congregational nature and those that are of a caring nature. In the past development of the European city this used to be confined to the development of clerical or monsterial structures and the various infirmaries. These elements function as new social hubs outside of the city center around which new development is encouraged and often realized.

Finally Gramsbergen defines the elements that can be attributed to

the Quality Enhancement of existing Urban Tissues throughout the development of the European city, namely Knowledge Institutes and Recreational Elements. Within her research there is a special interest within the Knowledge Institutes for the development of the University Faculties and their physical manifestation within the city, accrediting revival of a sense of urbanity to them, as uncovered by Thomas Bender in *"The University and the City"* (1988). Both the Knowledge Institutes and the Recreational Elements are of influence twofold; they are an amenity through their public accessibility of a unique kind within the confinement of the city and at the same time they are a body of representability. It is specifically the decentral component of the larger, academic Knowledge Institutes that Gramsbergen accredits with the capability of functioning as a Quality Enhancing Quartermaster. These and the Recreational Elements increase the level of living quality associated with the Urban Tissue they are situated in, predominantly through their physical and spatial manifestation and organization as often unique elements within the city.

Aside from their functioning as an institute, both Rossi (1966) and Gramsbergen (2014) assign, modeled after the works of Milizia, two further principles that are of essence when dealing with the Res Publica. Besides function, Milizia namely refers to placement firstly and lastly toward form. This latter is especially of concern in the creation and formation of space in such a way that it is recognizable, readable and relatable and will thusly be discussed in the next chapter, dealing with placemaking. The first however, placement, forms together with the functional element of the Res Publica an important contributor to the performance dimensions set out for good functioning Tissue, and is therefore of importance to discuss in relation to these three developmental characters that can be ascribed to various elements within the Res Publica.

RES PUBLICA AS ELEMENT OF STRUCTURE

As stated before it is the Urban Elements of the Res Publica that form the exception within the Urban Tissue, in fact, following Rossi (1966) they constitute the Urban Tissue. These elements form, amongst other factors as stated by Milizia, through their positioning within the Urban Tissue integral parts of the Urban Form and Urban Tissue and help navigate through these and link these together. They are factors that are characteristically dominantly of an urban nature but are equally applicable to the architectural conditions connected to the elements of the Res Publica, those architectural conditions however shall be dealt with in the next chapter in regard of placemaking. What is discussed

here is the elements of the Res Publica placed within the Urban Tissue of the city and in that sense forming a layer of structure within the Urban Form that ties together the various places within the city. It is in that sense that they, as Lynch (1960) defined, function as a Landmark. It must be noted that a landmark is not necessarily a large object but that its location is crucial. Their key characteristic is their singularity, it makes them unique and memorable within their context, it is their positioning within their direct surroundings and their spatial form or appearance that makes the Urban Elements of the Res Publica a Landmark. As Lynch states, it is the Figure-Background contrast in combination with their spatial location that forms the principal factor for these elements to be of a structuring nature. This structuring characteristic of the Res Publica, can function on multiple levels, either as a structuring element on a small-scale or Tissue level, up to city-scale, or Urban-Form level. This is based on their spatial prominence within the city and the tissue, as one can imagine, slight difference between Figure-Background and slight attention to spatial positioning will have a structuring power that does not reach across the entire city but is more applicable for the structuring of smaller groups of Urban Tissue. On the other end of the scale, large differences in Figure-Background in combination with large spatial prominence in positioning can have a structuring effect on the entire Urban Form of the city. In chapter two and four the importance of readability and navigability of the Urban Form and the Urban Tissues have been discussed, it is the Res Publica that aides in this through their role of Landmarks. Following the observations of Lynch these elements start to form good points of reference, increasing readability and navigability of the Urban Form or Urban Tissue, once they are grouped together in a pattern. As stated prior this thusly occurs on various scale levels, hence the gradation in importance of landmarks in the legend that goes with Lynch's maps in his theory "*Image of the City*" (1960). Within this gradation there is a special case to be made for the importance and role of the so called 'distant landmarks', those that have the capability to structure and form points of reference and readability of the Urban Form throughout the entire city. Before this separate category of elements of the Res Publica, often seen as major artifacts that constitute the city, is dealt with, a general theory in regard of the linking of the elements of the Res Publica is examined.

In chapter two "*The Importance of the Urban Form and the Introduction of Urban Tissue and Morphology*", the second layer of morphology as proposed by Trancik (1986) was defined as 'Linkage', or the linking together of certain distinguishable spaces within the Urban Tissue. These spaces and the way they are linked together form thusly the structuring of the Urban Tissue and, extrapolating this, the linking

together of the parts of the city, thusly structuring the city as a whole. Where the readability of the Urban Form and the Urban Tissue, taking into account the research of Kevin Lynch (1960, 1981), depends on the scale and spatial prominence of elements within the categories distinguished by Lynch – districts, paths, nodes, landmarks and edges-, depending on what they are supposed to structure on a city-wide scale or on a local Tissue-scale, the way in which these elements do so is in fact quite similar. The way that these Urban Elements, both as buildings as well as distinguishable urban spaces such as squares or parks, can be linked in order to obtain this structuring effect, following the research of Trancik (1986) is to be found in the search of Fumihiko Maki for a formal language to structure and organize urban space in his research *“Investigations into the Collective Form”* (1964).

In his research, Maki speaks of a spatial language, a master form, in which urban space can be organized. This is the collective form, the representation of urban elements that belong together, making a collective form. A collective form, that aides in the structuring of the Urban Form and the Urban Tissues of the city. In his research Maki concludes that this can be done in three matters: Compositionally, as Megaforms or as Groups/clusters. Though this is largely dealing with the relationship that all individual buildings in the entire city, both of public and of private nature, the notions that Maki proposes toward the ways of achieving collective form and linking Tissues together in the grander scheme of the Urban Form are certainly of use when discussing the way in which the elements of the Res Publica can be linked together in order to form a structuring element within the Urban Tissue and Form. Once again it must be noted that, as Rossi (1966) states, the way these elements manifest themselves spatially, formally, architecturally and in the way they are linked is ought to be inherent to the city they belong to, they are a characteristic of the city and at the same time characterize the city. Just as the Figure-Ground, for the positioning of these elements and the way they are linked together within the Urban Tissues of the city there is a certain set of rules both conscious and unconscious that are to be followed in the approach to design based on continuation of the existing Traditional European city, as it is in this city that these generating elements follow these rules and are thusly characteristic of that city whilst simultaneously characterizing it. Taking this in account and applying that to the three forms of ‘Collective Form’ of Maki, it can be stated that of these three it is predominantly the Compositional Collective Form and the Cluster Collective form are dominant in the Traditional European City. It is the Megaform that is a product of the techniques and visions of the 20th century, it is a man-made urban landscape feature and is only possible due to the

THE GROUPING OF URBAN ELEMENTS OF THE RES PUBLICA

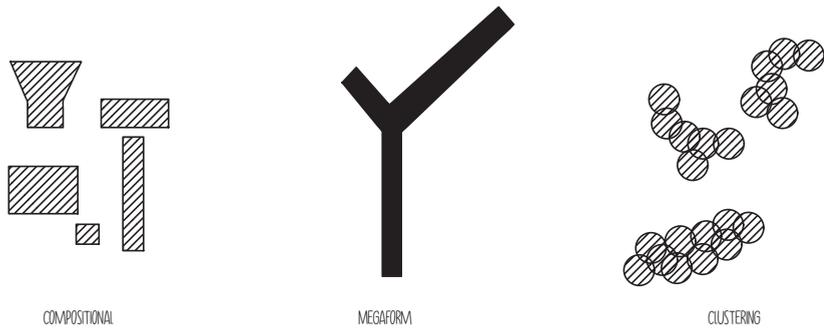


Figure 5.5: *The Grouping of Urban Elements according to the theory of Fumihiko Maki (1964)*

technologies at hand in the present-day (Maki, 1964). The suggestion of this is that many and diverse functions may beneficially be concentrated in one place, the megastructure concept depends on combination and concentration of the Res Publica. Some ideas might display a sense of virtuosity as observed by Maki, often achieved through the grandeur of scale, but does so at the expense of the human scale and needs. It is the Megaform Collective Form that conflicts with the perimeters and characteristics that are attributable to 'good' Urban Tissue as defined in chapter four. In the search for a form through which the Res Publica can form a structuring element within the city, the Compositional and the Cluster approach thusly remain.

The Compositional approach is commonly accepted and practiced in the past, elements that comprise collective form are preconceived and predetermined separately. They are individually tailored Urban Elements, then, proper function, visual and spatial, sometimes symbolic, relationship is established on the two dimensional plane. It links one space or one dominant recognizable Urban Element to the next. It is, according to Maki, the most understandable technique for making collective form and a natural extension of the architectural approach. But at the same time it is static, as its relies on predetermined ideas to conceive completeness through location and design. They are the product of a preconceived scheme and from a vision or plan for the city or a group of Urban Tissues as a whole. The Cluster Form on the other hand evolves from a system of generative elements in the Urban Tissue of the city. Some of the basic ideas of group-form can be found in historical examples such as the medieval cities in Europe and the towns on Greek islands in which the spatial and massing quality of these towns is sought after in their appearance of making large coherent structures and relies heavily on formal and architectural language rather than positioning per se. Aside from the material and formal language that

ACTIONS OF LINKAGE OF URBAN ELEMENTS

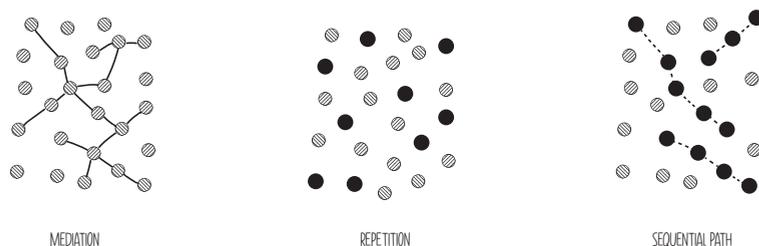


Figure 5.6: The Acts of Linkage of Urban Elements according to the theory of Fumihiko Maki (1964)

aides the sense of group-forming is the sequential development of these Urban Elements. Where the Compositional approach is derived from the plan through the positioning of the various elements of the Res Publica in order to create visual and experiential lines and patterns that link the elements, it is the Cluster approach that adds the three-dimensional component to this through formal and architectural appearance of these elements and the ordering of the elements through the creation of sets of sequences. In both of these approaches, that are not mutually exclusive but can be adopted side by side in the development of the city, the use of linkage in urban design on the morphological scale is considered the primary motive to make universality from diversity. It is of use when it comes to movement through the spaces of the city and thusly contributes to the urbanity, vitality and readability of the Urban Tissue and Form (Klasander, 2013, Lynch, 1981, Rossi, 1966). It is the glue that holds together the city, uniting the various layers and areas within the city and helps in making the Urban Form a recognizable and humanly understandable entity. It is the understanding of how to get from place to place and how these places in turn are related or linked to one another and aides as a bridging layer that communicates between the large scale of the Urban Form and the small scale of the individual pieces of Urban Tissue.

The linking of places, according to Maki (1964), can occur through physical manifestations in the public space but just as well through proper placement of Urban Elements that imply through their composition and mutual relation a link. These implied links are found in the composing of the Urban Tissue through the well-thought dispersal of the Res Publica, and can occur through mathematical and geometrical standards such as in the classical or renaissance compositions of towns, an approach that lies closest to the Compositional Approach or, according to Maki, subjectively in combinations of the Figure-

Ground that seem “right”, combined empirically or through reference of one another but always in such a way that its link is inevitable to all observers, which in turn lies closest to the Cluster approach. In the grouping of the Urban Elements three acts or operations of linkage that Maki (1964) defines can be deployed through proper placement of the Res Publica and the public space within the Urban Tissues of the City. Maki refers to these acts as Mediating, Repeating, and Creating Pathways, and defines these as follows:

To Mediate, according to Maki, is to connect the Urban Elements through specific intermediate elements or imply their connection by spaces that demonstrate the cohesion of masses in the Urban Tissue in which the Urban Elements are nested. They are thusly linked together through a recurring spatial element that, in itself, is not an inherent part of the Res Publica but is a means of spatial design that functions as a physical element tying together of the elements that do belong to the Res Publica. It is thusly, following the observations of Maki, accomplished by adequate physical means and it connotes multitudes of other transitions within the Urban Tissue. An example of such an intermediate element that ties together Urban Elements is the arcades of Bologna. These arcades, as a linking element, stretching over 40 kilometers through the city tie the public places, the elements of the Res Publica together.

The second act of linkage that is defined by Maki is the act of Repetition. To repeat in this sense is to link areas and increase readability of the urban scheme through repetition of a common factor in each of the dispersed parts of the Urban Form. The common factor, as Maki suggests, might be formal, material or even functional-historical, and forms together a readable unit that forms a point of recognition for those navigating through the city and the Urban Tissue. It is thusly more associated with the approach of Clustering rather than Compositional, although in the case of using a formal element to signify the presence of the buildings belong. An example of such a linking device, although subtle, is the grain size or the positioning of an Urban Element within the tissue, through repetition of a certain motif such as a setback within the Urban Tissue for each Urban Element of the Res Publica a sense of recognition is achieved and visual linkage obtained.

Lastly Maki defines Creating Pathways as a way to establish linkage. The act of Creating Pathways is to arrange the Urban Elements in such a way that they form a sequence of logical actions, or similar actions. They form in essence a flow diagram that helps people navigate through the vast diversity of Urban Tissues in the city and is both applicable

in the Compositional as the Clustering approach in order to obtain a sense of structuring of the Urban Tissues of the city. It functions in that sense as a frame in which logically related Urban Elements are linked together. The boulevard connections of places of worship in Rome as proposed by Sixtus V are an example of this. This also takes into account the principles of Lynch (1960) in regard of designing with pathways and landmarks. Clarity of direction, strengthened by strong termini, Urban Elements, are essential to the success and structure of this linkage tool and perhaps the strongest tool to employ when approaching the Res Publica as an intermediate layer between the Urban Form and a subset of Urban Tissue in the communication of a clearly readable, navigable and understandable city.

Using the Res Publica as an element of structure, both on the larger scale of the entire city and its Urban Form as on the smaller scale of the city quarter and the subset of Urban Tissue would, in regard of the theory of Maki be strongest developed through the creation of pathways between the various Urban Elements in such a way that a clear and readable composition is achieved. This is especially the case when emphasis is put on the aim to form and communicate a clear structuring of the Urban Form of the city. As stated prior it is this the major Urban Elements of the Res Publica, or the most impactful Landmarks as defined by Lynch (1960) that offer a sense of structuring on the city wide level. They take a special position within the strategy of structuring through composition and the creation of pathways. Bruno Taut in his work *“Die Stadtkrone”* (1919), refers to these unique elements as the Crowns of the City. They are typified by their prominence and visibility and unique positioning (Lynch, 1960) within this structure of Urban Elements and are of great essence for the society within the city and the structure of the city, they are elements such as the Duomo of Florence. This position is, as Bruno Taut states, reserved only for a few singular Urban Elements of the Res Publica and form the center of the structuring of the city. These City Crowns thusly work together with the other Urban Elements of the Res Publica in order to structure the city. They are, as Taut states, the *“sparkling diamond that is surrounded by the multicolored jewels that together built an a structure culminating at the top of the City Crown.”*.

This sense of structuring the city on the Compositional basis, as Maki already stated, is one that is also in the concept of hierarchical structuring of the Urban Elements in regard of the City Crown one that Taut also sees as inherently connected to the Traditional European city. In this traditional strategy of Urban Development it is the city crown and the administrative functions that shaped the core of the

structure of the town. This center-developing character, as stated prior in reference to the Gramsbergen (2014) is connected to the administrative or governmental function and were in this hierarchical system of structuring as proposed by Taut one that is accompanied by a structure that Lynch (1960) refers to as a 'dominant Landmark'. These approach finds its roots the old Cathedral towers and belfries of the Medieval European town, however as Taut states, adopting this hierarchical component within the structuring of the city through composition of the Res Publica is not mimicking but rather building forth upon the ideals of what makes the Traditional European city such a pleasantly readable, navigable and understandable Urban entity. The Traditional European city, following the reasoning of Taut, is exemplary for what has been discussed thusfar in this research. The dwelling area, the Res Economica cultivate and culminate, structured through the Urban Elements of the Res Publica, the multicolored jewels of the town, into a dominant Landmark, a singular great architectural element, the bright diamond upon which the citizen orients and finds identity from, translating the manifestation of the city and its urban form in a humanly understandable, navigable and readable object.

According to Taut, the nature of structuring the city like this unifies the qualities of mankind and their enjoyment of life. It is what Lynch (1960, 1981) refers to as a sense of pleasantness. It is what all those mentioned thusfar in this research aim to achieve in their definition of what renders a city as a pleasant entity; its readability and understandability. Through this organization and use of the Res Publica as structural component, building forth upon the ideals of the Traditional European city, it is the form of the city and its elements start to form a readable and understandable, a pleasant rhythm that helps navigate and validate the spatial qualities of the city. It forms through this manner of structuring, an inherent organization of the town that makes it unique but simultaneously universally understandable, even when its individual Urban Elements might not always be recognized so clearly.

To expand the city is, following the reasoning of Mika (1964), Lynch (1960,1981), Taut (1919), Rossi (1966) and Krier (2009) is thusly to happen in a relation to this system as the ultimate goal is to design a city that meets the performance dimensions of what makes a good city, to design for the European city as an entity in which not only one can live safely and healthily but also pleasantly. This urge or Aristotelian longing for this pleasantness or happiness rests deep in our psyche (Taut, (1919), Lynch (1981)). It is a longing so dominant that it is to be catered almost instinctively, perhaps not even necessarily looking at the past iterations of this idea of structuring, though so eminently present.

Once again, it is not of use to mimick these past iterations, rather it is necessary to understand their structuring and the positive influence that this structuring has on the understandability and readability of the city, contributing to the pleasantness of the city. In the antiquity the classical cities of Athens and Rome found their culmination of the city and their Urban Elements of the Res Publica in the administrative or the religious, in the Acropolis and the Forum. Closely related to this is the development of the City Halls and their belfries and the Cathedrals of Europe.

Imitating these iterations of the City Crown for the structuring of contemporary Urban Developments of the European cities literally however, as Taut already states in 1919, is of no use as their character is questionable when catering the problems at hand in contemporary Urban Development. What can be done is examine why and how these City Crowns developed and what characterizes and learn from this done thusfar. At the very core of the City Crown lies its premise as a 'dominant Landmark', a point of reference, orientation and identity of the town and citizen. They evoke a sense of familiarity and are universally recognizable as important point of interest or Urban Element within the city (Lynch 1960). They are thusly of a clear form and contrast with their background and assert a sense of spatial prominence from various points and positions within the city. They work together with other Urban Elements of the Res Publica but manifest themselves in form and volume as one that reigns over these Urban Elements and are of a unifying power, providing a sense of community and identity whilst providing a sense of orientation and understanding of the city at the same time. Structure as a role of the Res Publica is at the small scale how places fit together, how one part of the Urban Tissue relates to another, and at the large scale a sense of orientation and the understanding of the grander scheme that is the Urban Form. Its careful organization and positioning within the Urban Tissue shaped by the Res Economica thusly contributes to the understanding, readability and navigability of the city and its Urban Form and in the end contributes to the pleasantness of the city, which in the end is the aim that is tried to be met through the design in regard of the dimensions of performance for good Form and Tissue.

TURNING SPACE INTO PLACE

In chapter two “The Importance of Urban Form and the Introduction of Urban Tissue and Morphology”, the study of the Urban Tissue was broken down into three layers, in line with the observations of Trancik (1986) and Kropf (1993). These layers were defined as Figure-Ground, Linkage and Place. Throughout the previous chapter, attention has been given broadly to the first two layers, Figure-Ground and Linkage, in regard of examining Tissue. Though a large portion of the experience of plans and Urban Tissues within the city relies on the basis of these two layers, there is a great deal of importance that lies behind that third layer of Place in regard of forming Tissue based on the idea of Continuation of the Traditional European city. It is namely this last layer of Trancik (1986) that deals with those aspects that make the Urban Environment and Element uniquely attributable to a certain city. It is the character of the city, or as Rossi (1966) states, the individuality, the locus of the city. It is a major component of the cultural element that is an integral part of the Morphological study and approach of the city. This final layer of the approach is concerned with the sense identification regarding the subsets of Urban Tissue within the Urban Form. It is this aspect that forms the most important factor that Place contributes to. This factor, as denoted in the chapter four, is that of Identity, the component of Sense in regard of examining the performance dimensions of the Urban Tissue. As stated, Identity is the qualitative component of Urban Tissue that addresses the cultural and historical context of the Urban Tissue and Urban Form and is obtained through the reception of contextual meaning that comes from its cultural or regional content. Rossi (1966) refers to this as a “persistence” and is applicable both to the forming of the mass of the Urban Tissue, the *Res Economica*, and in the individual Landmark elements, the *Res Publica*. Place is, as defined in chapter two, the layer that adds the components of persistence, local culture and physical signs of the past, or ‘context’ to the Morphology. Throughout the previous chapters the Morphology has been referred to as an interplay of Figure and Ground, of Solid and Void and Object and Space, for Ground, Void and Space, only become place through their contextual meaning, through their gaining of an identity, stemming from their setting in their cultural, regional or historical content (Trancik 1986). This chapter sets out to argue for a base that

can be used to cater this character-component of Morphology that is shaped through tangible and intangible associations and interplays both on the level of the forming of Urban Tissue, or Res Economica as in the approach of design for the individual Landmark element, the Res Publica.

THE NECESSITY OF PLACE-THEORY

As stated in the introduction, the core of the Place component of Morphology encompasses the understanding of the cultural and human characteristics that bring a sense of identity to physical space. In addition to the examinations done in the previous chapters, Place is a concept that adds a sense of depth to the catalog of categorizations or types of spatial configurations and approaches, as denoted the previous chapters. Place deals with a sense of character, comprised of both the tangible and intangible cultural associations that are given to it by those who reside in the space and those who are passersby. They form a base for what Rossi (1966) refers to as the conscious and unconscious rules that seem to exist in every city that renders the built forms and artifacts within this city specifically related to that city, applicable thusly not only to the spatial configuration of the Tissue as a whole but also the appearance of the individual artifact that contributes to the forming of this Tissue. The sense of place is what translates the more abstract form-theories that have been discussed prior to specific configurations part of every specific city, it is what translates spaces into places that are recognizable and adhere to the identity of the specific city they are located in. According to Trancik (1986), a good functioning city or society requires a stable system of places within its Urban Tissue in which the individual can develop himself and can read and understand the communal culture of that city. As stated before there are both tangible and intangible components that attribute to this sense of place. The tangible component aiding the formation of this sense of character and an important part of the cultural component of Morphology is seen in the work "Genius Loci" (1979) by Norberg-Schulz. Schulz, states that a space becomes a place through the obtainment of a distinct character and that this character is one that has been recognized as a reality to face since ancient times. According to him it is the architecture that visualizes and emphasizes this character, it can respond to, and preferably enhance the environmental identity and the sense of place and thusly applicable to both the Res Publica as the Res Economica components of the shaping of Urban Tissue. The formmaker, both on the scale of the city and on the scale of the individual urban artifact, is thusly not only burdened with the task to define Figure and Ground but rather to create place through the interplay of the three

layers of Morphology as defined in chapter two. If one can characterize space as three dimensions, of which the first two are encompassed in Figure-Ground, and the third is regulated through translation of this figure ground into volume through these conscious and unconscious rules that Rossi speaks of, it is the sense of Place that is the dimension that shapes our cities sense of identity and is experienced by every user. This notion of a fourth component that shapes the world around us and lets us identify with it is as old as the art of Architecture itself as defined in chapter one, since Aristotle already observed a sense of place (Maia 2014). Throughout Modern history this notion has been echoed by various philosophers and formmakers, almost as frequently as models of ideal cities have been propelled as seen in the first chapter of this research. In general this notion can be brought down to the notion that place is a social product that is catered and set in the physicality that is space (Lefebvre 1991, Harvey, 1999). As space acquires meaning it becomes a place and this place in its turn is a source for the ability of identification with said space. A place is a space that is socially inhabited not only in the tangible sense by our physical presence, but also through the intangible sense as the keeper of our memories, laying a claim on the space and attributing this space to the inhabitants of the city (Maia 2014). In regard of this, the elements of the Res Publica, according to Rossi (1966) take a specific place in the keepers of memory. In their greatest sense these elements are to outlive their original function to become artifacts of memory and of culture and form constitutive elements of the structure and the identity or sense of place, of the city. It is the sense of Place that relates the inhabitant to the spaces of the city, they are relational and loaded with Identity. In his work "Non-Places" (2005), Augé states that there should be great emphasis on the identity of space that is created, on the reconstruction of place within the city. An important aspect that he denotes in regard of place is that, as stated before, it is primarily of cultural and historical, specifically local, nature. Where the 20th century saw a growth of the individual histories being more and more influenced by the collective history of society, it is also that the Modern era that allowed for the dismantling of reference points for collective identification, propelling the necessity for the re-creation of a sense of Place when addressing those areas within our cities troubled with structural problems and distant from those values that are so appreciated in the Traditional European city. In the tangible sense this is attributed by Augé to the spatial arrangements within our cities, defined as a group that has to withstand internal and external threats to ensure and strengthen identity. In the previous chapters spatial configurations and how they are specific for each locality have been discussed in regards of more tangible components. This chapter however is much more concerned with the intangible

aspects that attribute to the sense of identity and are concerned with the making of Place from space. An important base for this intangible experience that can be attributed to spatiality is the approach of the philosopher Heidegger (1927) towards space as described in his work "Being and Time". In this work Heidegger speaks of the relationship between Dasein, translatable as 'the sense of existence', and spatiality through various notions. One of the notions through which Heidegger constitutes Place from the experience of the 'Being' is through the concepts of nearness, or, as stated in the work; "In Dasein there lies an essential tendency towards closeness". The spatial component of Place, through the eyes of Heidegger can be brought down more concretely to the environmental or regional component that space has in the process of creating Place. The uniqueness in experience of distance and closeness and of high and low are key motivators for Heidegger to advocate for a sense of locality in the spatial component of the Place. Closeness in this sense however must not be examined as the objective notion of that at the smallest distance from oneself, but as aspect which lies close at heart. It is the physical space, if only seen as geometrical space, that is merely an abstraction, it needs character to be experienced and manifested and become 'close', it is in need of this fourth dimension that shapes Place. The philosophy of Heidegger as written in "Being and Time" (1927), is closely related, as stated before, to the notion of Identity that is put forward by Lynch in "Good City Form" (1981), and discussed in chapter two. Both notions find their basis in a necessity of closeness and the identificational aspect of closeness. Heidegger namely states that it is not only the rejection of the objective and measurable but the increase of meaningfulness through closeness that constitutes the Place component to space. Space becomes increasingly more meaningful, and thusly more a place, when it shares the same concrete contexts as the spaces it surrounded by in the Urban Form and if those who reside in it also share the same concrete contexts, or as Heidegger states it, belong to the same "worlds". This is captured in his distinction of the sense of 'belonging' that is part of Identity, defining a sense of belonging to a community, Zugehörigkeit, and a sense of belonging to a place, Hingehörigkeit. According to Heidegger, the latter constitutes the first. It is thusly that the intangible component of space becomes of greater importance, as the creation of a sense of belonging to the community of citizens that is the inhabitants of a city, is constituted by the degree to which these inhabitants relate to the spaces within the city. It is that which result in the feeling of 'being' of and with the city, it is the foundation that allows people to identify as a 'Berliner' (inhabitant of Berlin), 'Brummy' (inhabitant of Birmingham) or 'Parisien' (inhabitant of Paris). It is of this sense of identification that Edward Casey (1997) states, that places

become the 'indicators' of regions, a term Heidegger defines as the spaces that are under daily influence, the spaces we occupy as being, the core of our spatial association. Casey argues thusly for the necessity of particular places. These particular places are deemed essential to guide us through our cities and to situate us within the city. It is thusly that the third component of Morphology, which is established through the Identity component of Sense influences the Legibility component greatly. According to Casey these places are essential to the being-in-the-world, required to be present as in an encompassing and dense presence. It is those constituted places that shape the Urban Tissue, consequently the Urban Form and thusly the sense of pleasantness, as argued prior. These 'particular places' are those spaces that shape the multitude of spaces that is the Urban Tissue and thusly the total ensemble of Urban Tissues that is the Urban Form.

PLACE-THEORY AND LOCALITY OF THE URBAN TISSUE

So far various notions that shape Place have been covered; closeness, region, history, culture. All of these can be deemed as notions attributable to Identity, as examined in the previous section, and are of influence both on the shaping of the *Res Economica*, or the general mass of the Urban Tissue, and on the Urban Elements of the *Res Publica*. Additionally all of these can also be attributed to locality, they are factors that, according to Augé (2005), shape the uniqueness and quality of a city. That these components are of vital importance can be derived from the observations that J.B. Jackson (1984) makes in regard of 'reading' a space, or in his words, a landscape. Jackson namely states that it is the simplest of spaces that contains elements one is unable to explain and simultaneously the most complex of spaces contains elements one at once can recognize and understand. Continuing through his work "Discovering the Vernacular Landscape", that what has been defined as Legibility can be of bad quality yet still some elements and the role they play are still understandable. These are components that serve the notion of the creation of Place from space. It is the Identity that the 'Being' has attributed to the space that sets the square apart from the field. Krier (2003), takes this notion to elucidate why one of the most important aspects in the creation of Place from space is the local component. He states that the Traditional European city stood out clearly from its surroundings, both through outline and appearance as well as its architecture. It is through all these aspects, through Linkage, Figure-Ground, and Place, that the city, its Urban Form and its Urban Tissue could be attributed as belonging to a specific region and culture. Negation of this last layer, according to Krier (2003), results in the loss of urban design, or stated differently the loss of place, identity

and urbanity (Tasan-Kok 2014, Klasander 2013). Heidegger (1927) manifested this sense of belonging to Place as 'Heimat'. This Heimat, or sense of home, can be attributed to the physical manifestation of regional identity. It is much more of concern of regionality and locality, geographically and historically based, rather than those of more fictive nature such as 'nationality' (Röhrkramer & Schulz 2009), they are of a nature that belongs to the specific locality that is the city. This locality can be perceived on the European continent as derivations, specifications and alterations of 'the European city' (Bagnasco 2000, Benevolo 1993). Bagnasco, in his work "Cities in Contemporary Europe", argues that diverging from locality when cities expand affects identity. This locality is an aspect that, according to him, is easier to uncover in smaller cities, where regions of identity are marked much clearer, than in a large metropolis. However, this does not mean that locality is something that is lost in bigger cities; on the contrary it is very present but sometimes has its foundations found in older times or other regions and might take longer to uncover. The aspects of locality and culture form a base for one to build upon what might, should or could have been there (Ibelings 2003) and are always present, albeit in the heavily constituted or the more ambiguous, or as Jackson (1984) defines it; the 'Political Landscape' and the 'Vernacular Landscape'. The first being those spaces and structures designed to bring order and unity, that are well-defined territories. The latter being one where organization seems non-existent, spaces that seem to lack definition. Emphasizing 'seem' to lack definition, for even those spaces are defined and can form a source for uncovering locality and Identity and Context. The question however is how to uncover these aspects and translate them into a spatial configuration of Urban Tissue that is a continuation of the Traditional European city in regard of developing new or redeveloping existing parts of the city. To uncover the aspects that constitute locality and can form a base for the creation of Urban Tissue with the dimensions of Performance in mind, two vital concepts can be distinguished throughout methods and approaches, namely: Palimpsest as defined by André Corboz (1983) and Genius Loci as defined by Christian Norberg Schulz (1979). Both notions can uncover a base for the design of Urban Tissue, the sum of the Res Economica and Res Publica, in such a way that design, based on continuation of the Traditional European city, in regard of the previously addressed aspects can be achieved.

CORBOZ' PALIMPEST AND THE RES ECONOMICA

In 1983 André Corboz published his work "The Land as Palimpsest", in which he examines the transformation from 'natural' land into man-made figures; or from Vernacular to Political landscape. The notion of

Palimpsest, as Corboz puts it in the opening of the argument, comes from a general desire on the European continent to step back and try to understand the order of questions in regard how the physical and mental entity we refer to as 'land' was formed and what the entity itself consists of. There is a necessity or a vague need, according to him, to understand these questions, this is true specifically for the regard of the creation of Place, as that is a factor, as stated prior that is upheld largely by locality. Finding what constitutes this locality then thusly is finding roots for the creation of Place. Urbanized space, or urbanity as discussed so far, according to Corboz is constituted in the current day and age by a mindset rather than by the density of the Urban Tissue. This is, following Corboz, attributable to the developments of the Modern age and have thusly resulted in the neglect of the land as a base for development of the Urban Tissue as the case with the Traditional European city. The notion of Palimpsest deals with the recovery of this base, and thusly forms a contribution in the process of views discussed in this research thusfar in regard of defining an approach for designing for the European city as continuation of the Traditional city. In "The Land a Palimpsest" the stages of change that a piece of land sees are addressed, stating that the inhabitants of a piece of land tirelessly erase and rewrite the 'scroll' of soil upon which they live, eventually culminating in what Rossi (1966) defines as the persistences, the lines along which the settlement develops. There is according to this train of thought a relationship between those who inhabit and that which is inhabited, this can be seen as relatability and thusly as a base for identity. The land in this case, through this constituted relationship, is one that is an object of construction, or as Corboz states it, it becomes an artifact and from then on a product. This product of land is what we are considering when creating an Urban Tissue that aims to uphold a certain sense place and local identity. It is namely this aspect which is, according to the work, a creation from a more intangible factor. It stems from cultural, sometimes even mythological backgrounds. It is this duality, of tangible and intangible traces that form the palimpsest notion that shapes the place (Khirfan 2009). Its significance, according to Khirfan, both tangible and intangible, stems from memorial or contemporary importance and reflects social, historic or spiritual value for past, present and future. In the past, according to Corboz (1983), this importance was derived from and concerned with the order of the world and was aimed to not disturb this order and where possible even strengthen and enhance this through careful compositioning. Forming Place comes from locality or closeness as Heidegger (1927) observed, the notion of palimpsest forms thusly a good base in order to create spatial configurations and Urban Tissues in light of the creation of places rather than spaces.

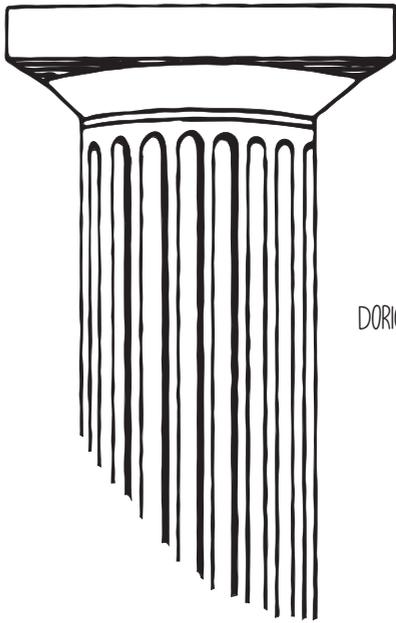
Corboz derives in his theory of Palimpsest the idea that the translation of land into a spatial figure of Urban Form or Urban Tissue constitutes an undeniable notion: land has and is a form. Throughout chapter one to four, the various configurations of Urban Form and Urban Tissue have been discussed, stemming from idealized models or abstractions. These forms are imposed physically upon the land, seen best when these models are rigorously applied without any reconciliation of the situated land at hand, seen in plans such as Hilbersheimers Vertikalstadt. The ideal model and the abstract possible spatial configurations however can and should, according to Corboz, adapt itself to the form that is the land. The parts of the model are not only altered or affected by the configuration of land upon which it is situated, it should be burdened with representing the land upon which it is situated. This sense of representation, states Corboz, is one that is not literally a tracing of what lies beneath, but rather a creation deriving from what lies beneath through adaptation of the ideal based on the characteristics of the locality at hand. What is important in regard of this observation is that there is a fictional component to mapping, it is not free of ideology and must not be seen as something purely of objective nature. The uncovering of the form of the land is a notion which is subjected to interpretation. The act of uncovering the form, according to Corboz, can not be reduced simply to that which is visible, it involves the entire being that is the land, that forms the locality. It is not the objectivity but the value one attributes to the configuration derived from the landscape beneath it. The Palimpsest notion states that developing, or in this sense configuring, the land is a process that is a result from history of stratification that has shaped the individuality and locality of that specific location. Place is thusly not a given but, as Corboz states, the result of a process of condensing the future aspirations and the past alterations. The making of Place from space in the notion propelled by Corboz stems from the very importance of the understanding of the past alteration and iterations that the piece of land has had. It is compared to a palimpsest; a piece of paper, unique as each piece of land, and that has been through many cycles of use and development. The goal is then, in the aim to create a sense of place to scrape these layers clean once more and to constitute form from the basis of the uncovering and making available again the use of these layers in order to adapt the Model and spatial configurations into the Form and the Tissue. It is this territorial aspect that Corboz argues to be the base for new development of parts of our Urban Tissue. Hans Ibelings (2003) sides with this approach and states that it is key to rediscover, to unravel what might or should have been there in light of developing new or redeveloping existing parts of our cities in order to design based on the notion of continuation of the Traditional European city. The approach

thusly is about finding out how the land would evolve throughout its history into an Urban Tissue or Form, when understanding this, its configuration into form then makes itself. This notion of what the land wants to be to constitute a sense of place can be captured through the second important concept attributing to uncovering a sense of place, namely that of the Genius Loci.

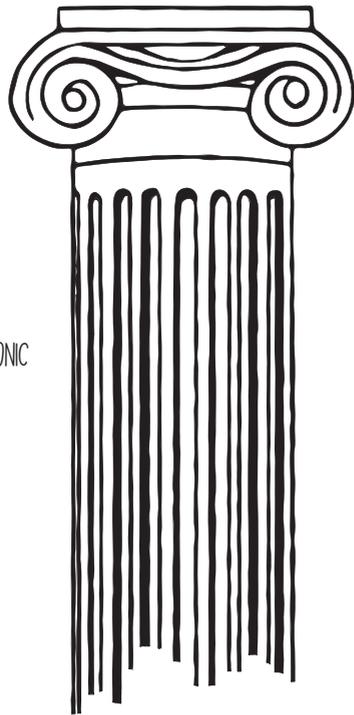
NORBERG-SCHULZ' GENIUS LOCI AND THE RES PUBLICA

As with the notion of Palimpsest from Corboz, the concept of Genius Loci as introduced by Norberg-Schulz (1979) roots the creation of man-made place into a natural basis. Just as Corboz, Schulz states that it is the earliest configurations of man-made space, of Urbanity that showcase the understanding of this nature, this locality and sense of place to create their Urban Forms and Tissues. They were attained with translating the given land into its form. An aspect that Schulz addresses in complementation to the notions previously discussed in regard of palimpsest are those attributable to place as a product of the cultural landscape, once again, tied to locality. It is this cultural landscape that manifests meaningfulness. According to Schulz this cultural aspect in addition to the palimpsest observations made above, satisfies man's need to understand the land upon which he resides, for, as Corboz (1983) noted, the inhabitant is in a relationship with the land that he inhabits. Two aspects in regard of this that are addressed in Genius Loci are order and character. The first being on that is visualized through spatial organization, the latter being symbolized through formal articulation. Once again thusly, the tangible and the intangible that are at interplay in the creation of place from space. The locality of character presupposes that there is a language of form that is attributable to that specific location, echoed by Rossi (1966) when discussing the unique local aspects that come in to play when examining the Urban Elements of the Res Publica. Space works in a certain way in certain areas and is thusly subjected to a cultural aspect, it assumes a coherent symbolic, architectural and spatial language that is bound to a locality. This is exhibited in the language of the orders of the Greek temples for example, but also in the language that is used in the creation of formal buildings, or Res Publica, throughout the middle ages and renaissance. It is the man-made place, according to Schulz that visualizes and symbolizes the understanding man has of the environment or the locality that he resides in, and through this process gathers meaning, constituting place. They are part from a particular environment, a locality, deemed, just as Corboz, essential by Schulz. Spaces become pleasant places according to him when the manifestation of these places are related to the land and the world around us in a similar way,

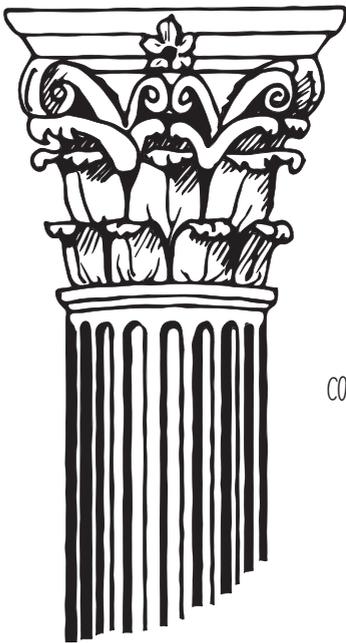
THE GREEK ORDERS



DORIC



IONIC



CORINTHIAN

Figure 6.1: The Classical Greek Temple Orders

seemingly expressing a common form, constituting what he refers to as a Genius Loci. This approach is defined by Schulz as the “classical” approach towards the spirit of the place, describing a situation where topological, cultural and geometrical traits are unified. The classical Genius Loci is one where there is a grouping of individual spaces, each with their own character, resulting in a network of places, or as stated in the previous chapter, a careful composition of the Urban Elements of the Res Publica. Each individual character however, as stated prior, is part of a family of characters, where there is some sort of coherence in interpretation and readability, in short identity. This results in a comprehensive, homogenous array of spaces and artifacts, where there is amongst its ranks options and possibilities for deviation and uniqueness while all adhere to similar basic notions in regard of clear communication, readability and understandability of their role as an element of the Res Publica. According to Schulz, all cities and urban landscape possess some sense of Genius Loci, and all places are constituted through identity, or as he refers to it, character. It is the character that makes the complex totality that is place. Man has, as denoted in “Genius Loci” (1979), a way to translate the natural land into the things that constitute his habitat, the spaces, the buildings, but it is based on locality through which manner this is done and this is unique for each region. Through his cultural approach of the creation of space, man symbolizes his understanding of this land he inhabits. Through this symbolization the space becomes, by the hands of culture, a place. The existential purpose of building thusly, according to Schulz, is to make from land place by uncovering the meanings potentially present in the given environment through the symbolization that is embedded in the culture of attributable to that locality. This cultural aspect that differentiates symbolization of land into form in the multitude of variations that it has all over the world is, states Schulz, constituted due to the local character, which he defines through the words of Goethe as a product of education and exposure from childhood onwards. It is what Rossi (1966) refers to as the relationship between the building and culture of the city, individuality of the cultural element that ties an Urban Element to a specific locality. This thusly states that, in the current day and age, even though there has been a large aim for uniformity and globalization, that there is a dominant culture, derived from the Traditional City that constitutes the way we see space and thusly determine whether or not it is quantifiable as a place and related to that city. It is this distinct cultural character that nurtures identification with the city. One can understand and orient the city through its clarity on the basis of the notions written in chapter two and four. However “feeling at home” or part of the city is of a whole different character. It is that sense of belonging and identification that

separates the visitor from the inhabitant and that separates the place from the space. Though the visitor might be able to point the places from the spaces, through the physical manifestation that these have taken on, it is not the case that he or she is able to pinpoint how this is a place and that is a space. It is cultural understanding and appropriation that answer this question of how. Even though culture is subjected to change, once again, there is some sense of dominant culture in regard to the translation of land into spatial configurations that are attributable to localities. This brings us back to the work of Heidegger and his denotation of *Hingehörigkeit*. There is namely a difference between stating that one is from a certain locality and stating that one is a certain local. In the latter is the cultural component that exceeds the spatial structure to which is referred. The individual in that latter case identifies with the dominant cultural aspect of the translation of land through symbolization into spatial configurations and the articulation of the Urban Element in the *Res Publica*. The spatial setting becomes in that case a network of identifiable spaces and objects; they become a composition of places. An additional important task lies thusly in the communication of this sense of place by these elements within the *Res Publica*, even greater than that of the elements in the *Res Economica* as these, according to Rossi (1966) summarize and constitute the identity of the city. This communication lies in an aspect greater than its material, namely in that of form. Specifically in how this form is communicated, constituted and how its form attributes to the spatial configuration and composition of the City's Form and subsets of Urban Tissue. It is their relationship with the city and how they built on one another. If it is then this communication that is of great importance in order to constitute its role as contributor of identity through the elements of the *Res Publica*, a shared base from which these elements are designed is valuable. It is a take on the creation of structure on the basis of repetition, but rather than Maki (1964) suggests to do this through literal repetition of a certain element, it is achieved through a shared sense of clarity and communication of a certain cultural and local component. This approach as defined by Rossi (1966) and Gramsbergen (2014) is to be found in the criteria that Milizia sets for the design of the individual element of the *Res Publica* in his "Principles of Civic Architecture". In this work Milizia defines the element of the *Res Publica* as a type, a unit in itself shaping and showcasing a general idea of the city and its culture. On top of the positioning and their cooperation in the structuring of the city, Milizia, and in line with that thusly Rossi and Gramsbergen, derive an approach toward design that cater the performance dimension of Identity and the final layer of Morphology, Place, as well. Milizia namely speaks of a general systemic approach toward designing these core elements of the city, in which the elements

of the Res Publica and specifically their form, are designed in relation to those characteristics that are part of the identity and locality of the city. The main principles that should, accordingly, form the base for this approach toward design of these elements are its Location and Readability. The first has been dealt with in the previous chapter, that latter is the component that is related to the communication of the sense of Place in the final layer of Tranciks (1986) approach toward morphology. This readability leads to understandability and in its turn, following Lynch (1981) to pleasantness. The readability is, according to Rossi (1966), achieved through careful design based on typology and through learning from the existing. In designing aimed on the continuation of the Traditional European city, this means the understanding of the types and their formal expressions within the existing city and find their commonalities in regard of their architectural characters and their formal manifestations. It is, as Rossi states, the understanding of this interrelationship between the elements of the Res Publica and the city that is specific to every city, and needs to form the basis for the design of these elements in order to continue to develop the European City as a continuation of the existing.

CREATING PLACE FROM SPACE

Regarding the two concepts Palimpsest and Genius Loci, the process of creating Place within the Urban Tissue is a layered process. First it is the adaptation and alteration of the physical aspect of the Urban Form and the Urban Tissue, the spatial configuration. It is namely of the two principal components of the city, the Res Publica and the Res Economica that both are essential contributors to the formation of the city and neither are amorphous, anonymous or non-influential in regard of the constitution of the city. Before a space can become a place, in line with the notions of palimpsest, there has to be a proper tangible configuration. This is subjected to the manner in which the land is translated into the physical form that is the Urban Space, the mass, the Res Economica that comprises the majority of the Urban Tissue and the Urban Form. It is a phenomenon that occurs in various ways in various localities, through the cultural component that is part of this process. It is the palimpsest that dictates in the classical approach of the Genius Loci, the dimensioning and the constitution of those Urban Elements that are of exceptional nature within the Urban Tissue. They are the distinguishable Urban Elements of the Res Publica that enter a relationship together with the Res Economica and configure the city in its uniquely cultural and local way. After this it is the cultural component of Genius Loci within the Urban Elements of the Res

Publica that fulfills the final step, lifting a link of spaces to a status of a Composition of Places. When the spirit of culture becomes one with the spirit of land, resulting in the spirit of place, resulting in a rooting of the Urban Tissue in the locality of the region and the identity of the city and its inhabitants, clearly readable, understandable and identifiable through the design and formal articulation of all these elements, the continuation of design for the European City is to be achieved.

A THEORETICAL FRAMEWORK DESIGNING FOR THE EUROPEAN CITY

As Kevin Lynch already stated in *“Good City Form”* (1981) assessing and creating Urban Tissue requires some sort of normative theory to do so. In line with Talen & Ellis (2002) in their paper *“Reclaiming the Search for Good City Form”*, there is a variety of views and observations in regard of the creation of Urban Tissue in a manner that is ‘Good’ or relatable to those characteristics of the Traditional City that are deemed ‘Good’. Throughout the previous chapters, various of these authors’ theories or excerpts of these theories have been addressed in order to try and define an approach or perimeters that are to be taken into account in the creation of Urban Tissue in line with the Traditional European City. The previous chapters define the characteristics that influence the creation of ‘Good Tissue’ in light of this approach through various theories such as the performance dimensions that Kevin Lynch (1981) set out when defining what creates good Urban Form. In addition to this the previous chapters also stated that rather than speaking of a ‘bad’ Tissue as a polar opposite of a ‘good’ Tissue, it would be of more truthful approach to speak of ‘good’ and ‘damaged’ Tissue. This observation lies in the nature that all Urban Tissue created always encompasses, to a certain degree, valuable characteristics. As the nature of ‘good’ Tissue is dependent on so many characteristics as an interplay amongst them, even the most steadfast traditionalist could not argue that a Modern Urban Tissue upholds no quality at all in regards of this multitude of characteristics. The rhetorical question posed by Granpré Molière that was introduced in introduction of the previous chapter holds a second part, namely why the old ballroom is more resplendent than a Modern reception room. This is the analogy that Molière picks to compare the traditional fragments of the city to their Modern counterparts. However, though one might prefer one over the other, it is safe to say that it is far from the case that there are no qualities whatsoever in either one of these. Both have their own set of qualities in regard to the extensive set of characteristics one could use to assess the both of these rooms. The same goes for assessing the various iterations of Urban Tissue that are present within the European city. Though the more traditional Tissue with its clearly defined spaces and relationships between building and street and public and private scores much better in regard to the characteristics defined in the previous chapter, it is not the case that the Modern Tissue upholds no quality in a single one of these characteristics, as showcased in the

third chapter of this book. These Tissues must thusly not be seen as 'bad' Tissues but, in line of the philosophy of the Continuation of the Traditional City rather as 'damaged' Tissues since, as stated prior, to a certain extent they uphold at least one characteristic that is of quality in relation to the Traditional City. These subsets of 'Damaged Tissue' form one of the challenges of the European City of today, namely the regeneration of its parts aside from the necessary expansion in general. As noted by Harold Carter in "*An Introduction to Urban Historical Geography*" (1982), it is these two Urban Developments that characterize the contemporary European City. Throughout this research perimeters and lines of approach have been sought in order to constitute an approach for these two trends of Urban Development in regard of forming a continuation, an extension of the Traditional European City. This chapter aims to bring together the various notions that have been discussed thusfar and contribute to an approach for Urban Development based on Continuation.

BASIS OF THE APPROACH

As stated before, the various theories that have been addressed throughout the previous chapters have been addressed as they have in common their search for the creation of Good Urban Tissue, often in relation to what is referred to as the Traditional City. In line of the Urban Development of the European City, this approach thusly finds its basis in the notion to design and execution of these Urban Developments of the contemporary European City as a continuation of the Traditional European City. The core of this approach lies, above all, in the clarity of the city's Urban Form as an integral whole. Throughout the various chapters, different notions on different scale levels of the City and their interdependence of one another have been addressed. Each of these notions contribute in some sort of way to this clarity and understandability of the city, they deal with spatial relationships on multiple scale levels in regard of the perception of the city. This spatial relationship already starts at the highest scale level of the city, namely the city in its entirety. To be concise, the Urban Form of the city and specifically the Urban Form as a product or alteration of an archetype of its spatial configuration. These archetypes, or city models, as discussed in chapter one occur in threefold; the Radial-Concentric, the Grid and the Network model. Bastard forms of these three, as Sitte (1889) refers to them, can be brought down to a dominant iteration of either one of these three as showcased in chapter one. It is the very base of the spatial arrangement of the city (Meena, 2014) and is the root of the spatial pattern of the activities that take place in the city throughout its past, present and future. The base of the approach lies thusly in the

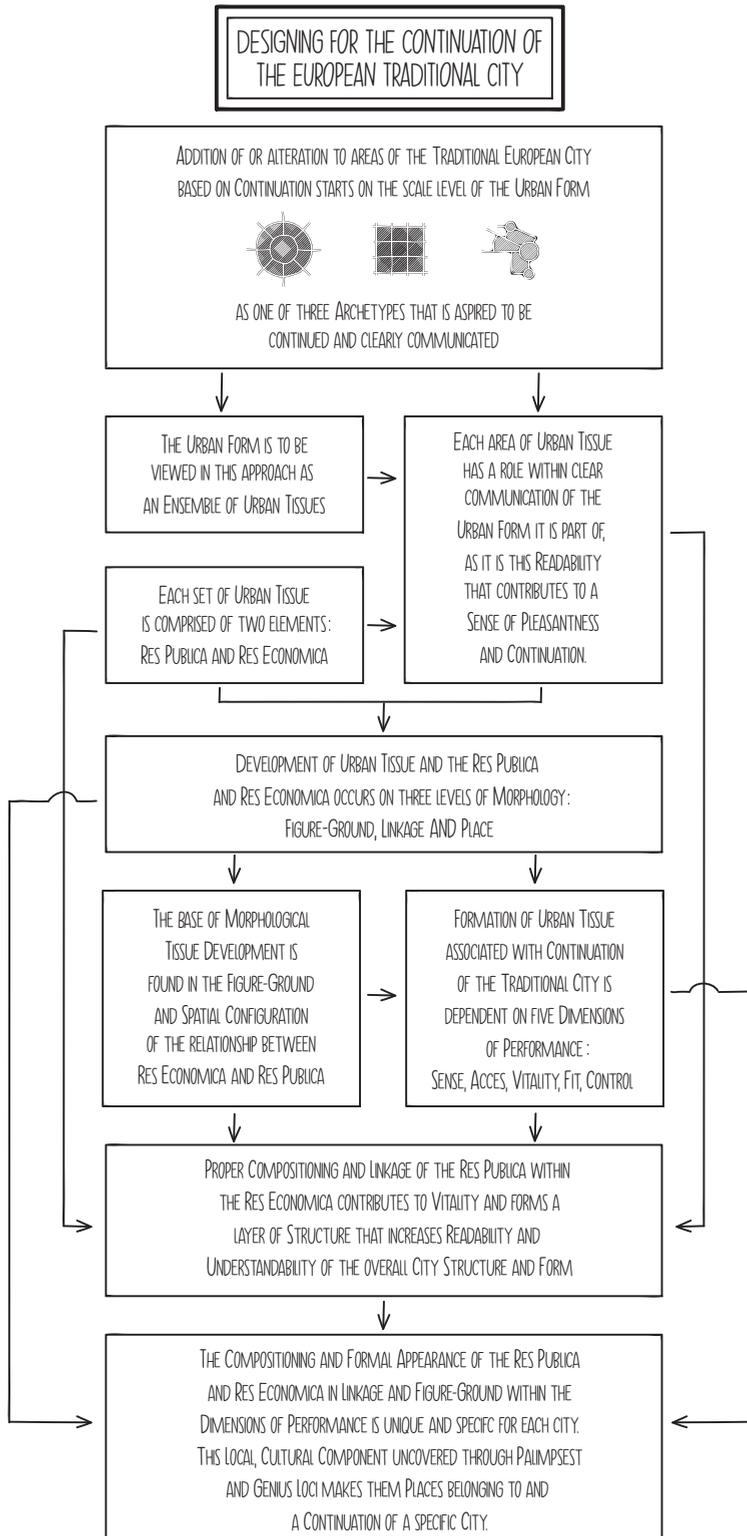


Figure 7.1: Schema of important notions and observations for the approach toward Designing for a European City

understanding and defining the spatial configuration, the Urban Form, of the city in order to redevelop existing parts and develop new parts of that Urban Form in regard of Continuation and Completion of this Form. It is this base that, according to Lynch (1960) is crucial when adding to or rebuilding parts of the city. The city in this sense, can namely be viewed as a large ensemble of its individual parts. Its Urban Form is the ensemble of the Urban Tissues of its parts. Urban Development in regard of continuation of the Traditional European City is thusly dependent on the development of the Urban Tissue of those parts that are added to or altered within this Urban Form.

DEVELOPMENT OF URBAN TISSUE

As stated in regard of the two challenges of Urban Development of the contemporary European City, in regard of developing for Continuation or Completion of the Urban Form of the Traditional City, it is the development of the Urban Tissue that is practically at hand. It is the development of this Urban Tissue that is in this approach burdened with the task of what Alexander (1973) refers to as 'Good Fit', its fit within the Urban Form and the interrelation between the parts of this Urban Form. Its spatial organization is thusly not only relevant for the structure, logic and readability of its own quarter or area, but is expected to play its part in the structuring, logic and readability of the entirety of the Urban Form. Urban Tissue and its spatial structuring can be brought down to two constituting elements, each with their own, vital contribution to the structuring of the city and its parts, namely the Res Publica and the Res Economica. The Res Economica in this sense, can be seen as the greatest mass of the city they are the private structures that comprise the majority of the city. The Res Publica forms those Urban Elements that are exceptional within this mass of the Res Economica. They are what Rossi refers to as Primary Elements or Gramsbergen refers to as Quartermaster. They are specific elements with additional structuring capabilities as a layer between the Urban Form and the subset of the Urban Tissue. These elements aide in the constituting and developing of new and existing subsets of Urban Tissue within the greater entity that is the Urban Form. Their status apart and additional influence will be discussed later, as first the general development of the Tissue as a whole, a sum of Res Economica and Res Publica is discussed.

The formation of the Urban Tissue in the light of continuation of those characteristics associated with the Traditional City is characterized through a set of performance dimensions as discussed in chapter four. These performance dimensions are based on the observations of Lynch (1981) in his discussion of what defines a good city. These performance

dimensions can be brought down to Sense, Vitality, Access, Fit and Control. Sense in this approach deals with the degree to which the city and its Form can be clearly perceived and mentally differentiated and structured in time and space by its residents. It is the degree to which that mental structure connects with the built form at hand and thusly builds forth upon the previously explained necessity of the communication of the Urban Form through the spatial configurations in the subsets of the Urban Tissue. Sense, in line with the observations of Lynch, can be brought down to five characteristics; Identity, Structure, Congruence, Transparency and Legibility. It is specifically Identity, Structure and Legibility within this approach for Continuation of the Traditional City that are of importance. Identity refers to the extent to which people can recognize a specific place as being distinct and uniquely attributable to that specific city. Structure, at a small scale, speaks of how places fit together. It deals with the internal organization of a subset of Tissue. Structure, at a large scale, deals with orientation and understanding of the larger image of the Urban Form and the City. Aside from dealing with the internal organization of a subset of Tissue, it thusly also deals with the connection of the various parts of Tissue within the Urban Form and the thusly the structuring of the Urban Form as a whole. Sense's last main contributor, Legibility deals with the rate to which the structure and identity both on the largest and the smallest scale can be seen within the Urban Tissue and deals with the Urban Elements as a medium that exhibit implicit and explicit means about the functioning of particular spaces and places within the city and the Urban Form of that city. Vitality represents the degree to which the Urban Form and the subsets of the Urban Tissue support the vital functions and capabilities of the inhabitants. Its three principal features are sustenance, safety and consonance. Vitality deals with the support of natural rhythms and necessities of life within the Urban Tissues. It can be closely tied to Access, which is the ability to reach other persons, activities, resources and places. Access speaks of the quantity and diversity of the elements within reach of the Urban Tissue. Both of these together thusly advocate for a proper balance and dispersal of Urban Elements of the Res Publica within the Res Economica. As stated before, every subset of Urban Tissue takes a position and functioning within the greater whole that is the Urban Form. Not every part of Tissue is City Center and not every part of Tissue is peripheral. Each subset of Tissue has thusly not only the task of communicating its part within the structure of the Urban Form but also its role within the Urban Form. The dimension of Fit is deals with this. Fit is namely the degree to which the form and the capacity of spaces, channels and equipment within the Urban Tissue match the pattern and quantity of actions that people customarily engage in within that specific role as part of the city. The

final Performance Dimension, Control, deals with the degree to which the use and access of spaces and activities within the subset of Urban Tissue are controlled by those who use, work or reside in them. Its three main characteristics are congruence, responsibility and certainty and are predominantly focused about the stakes which those who make use of the specific subset of Urban Tissue have within it.

These performances however deal with the characteristics of what constitutes a subset of Tissue that continues those values attributable to the Traditional European City, they do not in themselves speak of what constitutes the spatial configuration of Urban Tissue. These Dimensions of Performance do, however, execute a set of demands upon the creation of the Urban Tissue and each does so at a different level of the creation of the Urban Tissue and the different levels of the Urban Tissues roles within organizing itself, Tissue in its surrounding and the Urban Form of the city as a whole. To examine these layers, the development of the Urban Tissue and its two components Res Publica and Res Economica is to be viewed on three different Morphological levels, as defined by Roger Trancik (1986), namely Figure-Ground, Linkage and Place.

DEVELOPING URBAN TISSUE -THE FIGURE-GROUND

The Figure-Ground theory, as explained in "*Finding Lost Space*" (1986), regards the relative land coverage, dealing with the balance between the built and the unbuilt space and it forms the basis of the development of the Urban Tissue. Perhaps the most influential and recurring aspect of the Figure-Ground in regard of the Performance Dimensions as stated prior is the Urban Poché. Where in architecture poché discusses the solids of the architecture regarding the walls and columns, or so to say everything that is depicted as solid black in drawings, it is in Morphology that poché discusses the supportive structure of the space in the city. It is about the relationship that the figure forms with the ground, how the solid relates to the void and the object to space. This can be seen in light with the observations of Kropf (1996) regarding the 'resolution' of the Urban Tissue that has been discussed in chapter two. The problem of spatial design and the development of Urban Tissue is, as stated in chapter two, one that regards the connection of the form of the building to the structure of the site to create positive exterior space (Trancik 1986). These three connections can be found in the three resolutions of Kropf, the Building as the highest resolution, the structure of the site, or the Plot as the intermediate resolution and the exterior space that is finds its foundation in the lowest resolution, the Plot Series.

It is the interdependence and performance of the Figure-Ground in regard of the Performance Dimensions on each of these three level that constitute an Urban Tissue that can be seen as a continuation of the values spatiality and urbanity of the Traditional Urban City. Within the Figure-Ground of the Tissue created by the pattern of solid and void are special occurrences or moments that together form lines and connections within and to parts of the city. Trancik defines this as the spatial datum of the city. Datum in this case refers to a line of force to which the play of solid and void is denoted, in a similar fashion as the play of notes on a piece of sheet music is denoted on the musical staff. It is specifically in this Datum that the relationship between the Res Publica and the Res Economica comes into play. As stated before, the Res Publica not only contributes to Vitality and Access, it also contributes to Structure. Careful positioning of the Res Publica, in light of the Datum that Trancik discusses results in a positive influence in regard of the Structuring of the Urban Tissue. In addition to this it is the positioning of the Res Publica not solely in a singular subset of Urban Tissue but throughout the Urban Form and the cooperation of subsets of Urban Tissue that forms an important factor in the understandability and navigability of the Urban Form and the Urban Tissues. This is encompassed in the next layer of morphology as defined by Trancik; Linkage.

DEVELOPING URBAN TISSUE - LINKAGE AND THE RES PUBLICA

In regard of Linkage, aside from the datum and the structuring of the Figure-Ground, special attention is given in this approach to the positioning and the role of the Res Publica element of the Urban Tissue. As stated before it is the Urban Elements of the Res Publica that form the exception within the Urban Tissue, in fact, following Rossi (1966) they constitute the Urban Tissue. These elements form, amongst other factors as stated by Milizia, through their positioning within the Urban Tissue integral parts of the Urban Form and Urban Tissue and help navigate through these and link these together. These spaces and the way they are linked together form thusly the structuring of the Urban Tissue and, extrapolating this, the linking together of the parts of the city, thusly structuring the city as a whole. Where the readability of the Urban Form and the Urban Tissue, taking into account the research of Kevin Lynch (1960, 1981), depends on the scale and spatial prominence of elements within the categories distinguished by Lynch – districts, paths, nodes, landmarks and edges-, depending on what they are supposed to structure on a city-wide scale or on a local Tissue-scale, the way in which these elements do so is in fact quite similar. In regard of structuring Tissue and Form on the morphological level of Linkage,

the theory of Maki as proposed in his "*Investigations into the Collective Form*" (1964) in addition to the Performance Dimension of Sense of Lynch (1981) are taken as guidance for the developing of the Urban Tissue and specifically its Res Publica component. In his research, Maki speaks of a spatial language, a master form, in which urban space can be organized. This is the collective form, the representation of urban elements that belong together, making a collective form. A collective form, that aides in the structuring of the Urban Form and the Urban Tissues of the city. Just as the Figure-Ground, for the positioning of these elements and the way they are linked together within the Urban Tissues of the city there is a certain set of rules both conscious and unconscious, present in and derivable from the existing Traditional City, that are to be followed in the approach to design based on continuation of the existing Traditional European city, as it is in this city that these generating elements follow these rules and are thusly characteristic of that city whilst simultaneously characterizing it (Rossi, 1966). In regard of designing Urban Tissue as a Continuation of the Traditional City, two main approaches within the dispersal of the Res Publica in light of Maki's theory can be taken on, namely those of Compositioning and of Clustering. The Compositional approach is commonly accepted and practiced in the past, elements that comprise collective form are preconceived and predetermined separately. They are individually tailored Urban Elements, then, proper function, visual and spatial, sometimes symbolic, relationship is established on the two dimensional plane and is the most understandable technique according to Maki. The Cluster Form on the other hand evolves from a system of generative elements in the Urban Tissue of the city. Where the Compositional approach is derived from the plan through the positioning of the various elements of the Res Publica in order to create visual and experiential lines and patterns that link the elements, it is the Cluster approach that adds the three-dimensional component to this through formal and architectural appearance of these elements and the ordering of the elements through the creation of sets of sequences. In both of these approaches, that are not mutually exclusive but can be adopted side by side in the development of the city, the use of linkage in urban design on the morphological scale is considered the primary motive to make university from diversity. This linking in turn can be achieved through Mediating, Repetition and the Creation of Pathways, were most universally this is done through the latter, the Creation of Pathways. The act of Creating Pathways is to arrange the Urban Elements in such a way that they form a sequence of logical actions, or similar actions. They form in essence a flow diagram that helps people navigate through the vast diversity of Urban Tissues in the city and is both applicable in the Compositional as the Clustering approach in order to obtain a sense of

structuring of the Urban Tissues of the city. This also takes into account the principles of Lynch (1960) in regard of designing with pathways and landmarks. Clarity of direction, strengthened by strong termini, Urban Elements, are essential to the success and structure of this linkage tool and perhaps the strongest tool to employ when approaching the Res Publica as an intermediate layer between the Urban Form and a subset of Urban Tissue in the communication of a clearly readable, navigable and understandable city. As stated prior it is this the major Urban Elements of the Res Publica, or the most impactful Landmarks as defined by Lynch (1960) that offer a sense of structuring on the city wide level within this net of linked Urban Elements. They take a special position within the strategy of structuring through composition and the creation of pathways. These elements require additional attention within their positioning within the city as they structure and aide not only the Urban Tissue but the Urban Form. They are typified by their prominence and visibility and unique positioning (Lynch, 1960) within this structure of Urban Elements and are of great essence for the society within the city and the structure of the Urban Form. These elements are referred to in chapter five as the City Crowns. They work together with other Urban Elements of the Res Publica but manifest themselves in form and volume as one that reigns over these Urban Elements and are of a unifying power, providing a sense of community and identity whilst providing a sense of orientation and understanding of the city at the same time. Linkage within Morphology and Structure as a role of the Res Publica thusly deals at the small scale how places fit together, how one part of the Urban Tissue relates to another, and at the large scale with a sense of orientation and the understanding of the grander scheme that is the Urban Form. Its careful organization and positioning within the Urban Tissue shaped by the Res Economica thusly contributes to the understanding, readability and navigability of the city and its Urban Form and in the end contributes to the pleasantness of the city, which in the end is the aim that is tried to be met through the design in regard of the dimensions of performance for good Form and Tissue.

DEVELOPING URBAN TISSUE - PLACE, LOCALITY, IDENTITY

As Rossi states (1966) it is through the analysis of the Urban Tissue of the existing Traditional City that the rules to which they adhere are uncovered. Analysis of the Traditional City uncovers these rules that are either conscious or unconsciously followed and what makes them a part or related to a certain city and showcase the specific role of that tissue within this grander scheme that is the Urban Form. Thus far the first two layers have been discussed in relation to how they are to be approached

in order to form a continuation of the Traditional European City. Though a large portion of the experience of plans and Urban Tissues within the city relies on the basis of these two layers, there is a great deal of importance that lies behind that third layer of Place in regard of forming Tissue based on the idea of Continuation of the Traditional European city. It is the character of the city, or as Rossi (1966) states, the individuality, the locus of the city. It is a major component of the cultural element that is an integral part of the Morphological study and approach of the city. This final layer of the approach is concerned with the sense identification regarding the subsets of Urban Tissue within the Urban Form. As explained in chapter six, Identity is the qualitative component of Urban Tissue that addresses the cultural and historical context of the Urban Tissue and Urban Form and is obtained through the reception of contextual meaning that comes from its cultural or regional content. Rossi (1966) refers to this as a “persistence” and is applicable both to the forming of the mass of the Urban Tissue, the *Res Economica*, and in the individual Landmark elements, the *Res Publica*. As stated before there are both tangible and intangible components that attribute to this sense of place. As space, created through the layers of Linkage and Figure-Ground, acquires meaning it becomes a place and this place in its turn is a source for the ability of identification with said space. A place is a space that is socially inhabited not only in the tangible sense by our physical presence, but also through the intangible sense as the keeper of our memories, laying a claim on the space and attributing this space to the inhabitants of the city (Maia 2014). These particular places are deemed essential to guide us through our cities and to situate us within the city. It is thusly that the third component of Morphology, which is established through the Identity component of Sense influences the Legibility component greatly. There are thusly certain formal appearances of both the *Res Publica* and *Res Economica*, forming places in such a way attributable to a specific city. Continuation of that city, as this approach sets out to do, thusly as result also means the continuation of these formal appearances and identities that are associated with that specific city. This specificity, uniqueness or locality can be perceived on the European continent as derivations, specifications and alterations of ‘the European city’ (Bagnasco 2000, Benevolo 1993). The aspects of locality and culture form a base for one to build upon what might, should or could have been there in order to develop Urban Tissue as a continuation of the Traditional European City. To uncover the aspects that constitute locality and can form a base for the creation of Urban Tissue with the dimensions of Performance in mind, two concepts are defined within the approach in chapter six, namely those of Palimpsest and the *Genius Loci* in relation to the *Res Economica* and the *Res Publica*. Regarding the two concepts Palimpsest

and Genius Loci, the process of creating Place within the Urban Tissue is a layered process. First it is the adaptation and alteration of the physical aspect of the Urban Form and the Urban Tissue, the spatial configuration. It is namely of the two principal components of the city, the Res Publica and the Res Economica that both are essential contributors to the formation of the city and neither are amorphous, anonymous or non-influential in regard of the constitution of the city. Before a space can become a place, in line with the notions of palimpsest, there has to be a proper tangible configuration. This is subjected to the manner in which the land is translated into the physical form that is the Urban Space, the mass, the Res Economica that comprises the majority of the Urban Tissue and the Urban Form. It is a phenomenon that occurs in various ways in various localities, through the cultural component that is part of this process. It is the palimpsest that dictates in the classical approach of the Genius Loci, the dimensioning and the constitution of those Urban Elements that are of exceptional nature within the Urban Tissue. They are the distinguishable Urban Elements of the Res Publica that enter a relationship together with the Res Economica and configure the city in its uniquely cultural and local way. After this it is the cultural component of Genius Loci within the Urban Elements of the Res Publica that fulfills the final step, lifting a link of spaces to a status of a Composition of Places. When the spirit of culture becomes one with the spirit of land, resulting in the spirit of place, resulting in a rooting of the Urban Tissue in the locality of the region and the identity of the city and its inhabitants, clearly readable, understandable and identifiable through the design and formal articulation of all these elements, the continuation of design for the European City is to be achieved.

DESIGNING FOR THE CONTINUATION OF THE TRADITIONAL EUROPEAN CITY

So far this concluding chapter has highlighted the most notable findings in regard of the assessment of Urban Form, Urban Tissue and Morphology and the various theories written about these concepts that have been examined in the previous chapters. Each of these theories and approaches form a sub-notion upon which one can build forth in regard of approaching one of the two main tasks of Urban Development of the contemporary European City, namely that of regeneration of existing parts of the City and development of new parts of the City. Elements of an approach towards these tasks of Urban Development in regard of the continuation of the Traditional European City have been examined and combined through the course of this research and are dealt with throughout the chapters of this book. The approach as derived from these elements and shown in figure 7.1 starts

from the notion that this continuation is to occur on all levels of the Urban Configuration of the City, from the highest level in the Urban Form to the smallest level of the individual Urban Element. Through the approach of the City and the tasks of Urban Development on the basis of this notion, the approach toward Design for Continuation of the European Traditional City is made. Combining this core notion and all observations discussed and examined in this research, briefly summarized in this chapter, result in an approach based upon the Urban Development of Tissue, based upon the role that it plays within the ensemble of Urban Tissues that is the Urban Form and how this is enhanced and communicated. The formation of Urban Tissue following this approach lies with the clarification of the communicative function that the examined Tissue has in regard of the Urban Form and City as a whole. It takes on the increase of the readability of the Urban Form and the City as whole and the Urban Tissue at hand as a part of this through the various layers of Morphology, in order to form a base to design the Tissue at hand, be it new or existing, in such a way that it forms a Continuation of the Urban Form and the attributes of the Traditional European City. At its basis, the notions that constitute this approach are not new, they are a revisiting of theories and notions that each, individually, have been known often for quite a while. This approach however aims to combine each of these notions and theories into a singular approach that takes these notions and perimeters of past theories in regard of designing based on the values of the Traditional City into account. It is an approach that focusses at its core on the spatial components of the City and how to take these once again as a starting point for the Urban Development of the City, specifically in regard of the continuation of the values present in the grand ensemble that is the Traditional European City.



BIBLIOGRAPHY

A

- Abel, M. (2007). *Medieval Urban Planning*. Cambridge: Cambridge Scholar Publishing.
- Alberti, L.B. (1988). *On the art of Building in ten books*. Cambridge, MA; MIT press.
- Alexander, C. (1973). *Notes on The Synthesis of Form*. Cambridge, MA: Harvard University Press.
- Alexander, C. (1977). *A Pattern Language*. Oxford: Oxford University Press.
- Augé, M. (2005). *Non-Places*. London: Verso Books.

B

- Bagnasco, A. (2000). *Cities in Contemporary Europe*. Cambridge: Cambridge University Press.
- Bairoch, P. (1988). *Cities and Economic Development*. Chicago, IL: Chicago University Press.
- Barke, M.(2018). *The Importance of Urban Form as an Object of Study*. Newcastle Upon Tyne: Northumbria University Press.
- Behne, A. (1923). *Der Moderne Zweckbau*. Berlin: Ullstein
- Benevolo, L. (1993). *The European City*. Oxford: Blackwell Publishers.
- Benevolo, L. (2000). *The History of Modern Architecture*. Cambridge, MA: MIT Press.
- Berman, M.(1982) *All that is Solid melts into Air*. New-York, NY: Verso Books.
- Blom, A., Jansen, B., Van der Heiden, M. (2004). *De Typologie van de vroeg-naoorlogse woonwijken*. Netherlands: Rijksdienst voor Monumentenzorg.
- Bohl, C.C. (2009). *Sitte, Hegemann and the Metropolis Modern*. Abingdon: Routledge.

C

- Carter, H. (1982). *Introduction to Urban Historical Geography*. London: Hodder & Stoughton
- Casey, E.S. (1997). *The Fate of Place*. Oakland CA: UC Press.
- Childe, G. (1950). *The Urban Revolution*. The Townplanning Review (21, 01). Liverpool: Liverpool Universit Press.

Childs, P. (2000). *Modernism*. Abingdon: Routledge.
Conzen, M.R.G.(1975). *Geography and Townscape Conservation*.
Symposium of Applied Geography. Giessen: Lenz.
Corboz, A. (1983). *The Land as Palimpsest*. Diogenes (31, 121).
Paris: P.U.F.

D

Dear, M.J. (1986). *Postmodernism and Planning*. Environment and
Planning (4, 3). Thousand Oaks, CA: SAGE publications.
De Vos, E. & Geerinckx, S. (2016). *Modernist High-Rises in Post-War
Antwerp*. *Cidades* (33, 01).
Diez-Medina, C., Monclus, J. (2016), *Modernist Housing Estates
in European Cities*. *Planning Perspectives* (31, 01). Abingdon:
Routledge.

F

Frampton, K. (1982). *Modern Architecture, A Critical History*.
London: Thames & Hudson Ltd.

G

Gramsbergen, E. (2014). *Kwartiermakers in Amsterdam*. Nijmegen:
Van Tilt
Goddard, J. & Vallance, P. (2013). *The University and the City*.
Oxford: Routledge.
Grassi, G. (1975). *The Architecture of the New Frankfurt*. Neue Bauen
in Deutschland. Zurich: ETH.

H

Hall, P. (2008), *The Form-based Development Plan*. Hoboken, NJ:
John Wiley & Sons.
Hall, P. (2014). *Cities of Tomorrow*. Hoboken. NJ: John Wiley &
Sons.
Hall, P. (2015). *The Robust City*. Hoboken. NJ: John Wiley &
Sons.
Harvey, D. (1999). *The limits to Capital*. New York, NY: Verso
Books.

Hegemann, W. (1922). *The American Vitruvius*. Dover: Dover Publications.

Heidegger (1927). *Being and Time*. Oxford: Blackwell.

J

Jackson, J.B. (1984). *Discovering the Vernacular Landscape*. New Haven, CT: Yale University Press.

Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York, NY: Penguin Random House Inc.

Jansen, B., Ruitenbeek, J., Van Bommel, H., Zweerink, J. (2004). *Pendrecht; Cultuurhistorische analyse en beschrijving*. Rotterdam; dS+V.

Jencks, C. (1973). *Modern Movements in Architecture*. Harlow: Anchor Press.

Jencks, C. (1977). *The Language of Post-Modern Architecture*. Hoboken, NJ: John Wiley & Sons.

K

Kendall, S.H. (2010). *Residential Open Building*. Abingdon: Taylor & Francis.

Khirfan, L. (2009). *Traces on the Palimpsest*. *Cities* (27 ,05). Amsterdam: Elsevier.

Klasander, A.J. (2013). *The Challenges of the Modernist Urban Landscape*. *Nordic Journal of Architectural Research* (05, 01). Stockholm: KTH.

Krier, L. (2009). *Architecture of Community*. Washington D.C.; Island Press

Krier, R. (2003). *Town Spaces*. Basel: Birkhauser.

Kropf, K.S. (1996). *Urban Tissue and the Character of Towns*. *Urban Design International* (01, 01). London: Palgrave Macmillan.

Kropf, K.S. (1993). *The Definition of Built Form in Morphology*. Birmingham: University of Birmingham Press.

L

Lefebvre, H. (1991). *The Production of Space*. Hoboken, NJ: John Wiley & Sons.

Lozano, E.E. (1990). *Community Design and the Culture of Cities*. Cambridge: Cambridge University Press.

Lynch, K. (1981). *Good City Form*. Cambridge, MA: MIT Press.

Lynch, K. (1960). *Image of the City*. Cambridge, MA: MIT

M

Maia Silva-Moreira, H.J. (2014). *Space and Place in Urban Culture*. Porto: Corpos Editora.

Maki, F. (1964). *Investigations into the Collective Form*. St. Louis, MO: Washington University Press.

May, E. (1930). *Das Neue Frankfurt*. Frankfurt: Engler & Schlosser.

Monclus, J. & Diez-Medina, C. (2017). *Urban Visions*. Cham: Springer.

Meena, V. (2014). *City Forms*. Lecture Urban Planning. Rajasthan: Jaipur National University.

Mumford, L. (1947), *The Nature of our Age*. *The Sociological Review* (37, 01). Thousand Oaks, CA: SAGE publications.

Mumford, L. (1961). *The City in History*. San Diego, CA: Harcourt Brace.

N

Norberg-Schulz, C. (1979). *Genius Loci*. New York, NY: Rizzoli

P

Panerai, P., Castex, J., Depaule, J.C., (1977). *Urban Forms*. Oxford: Architectural Press.

Palladio, A. (1977). *The Four Books of Architecture*. New York, NY: Dover Publications.

Pounds, N.J.G. (2005). *The Medieval City*. Westport, CT: Greenwood Press.

R

- Röhrkramer, T., Schulz, F.R. (2009). *Space, Place and Identities*. History Compass (07, 05). Oxford: Blackwell Publishers.
- Rossi, A. (1966). *The Architecture of the City*. Cambridge, MA: MIT Press.
- Rowe, C., Koetter, F. (1978). *Collage City*. Cambridge, MA: MIT Press.

S

- Singh, S. (2016). *Town Planning Trends in Europe*. Lecture on Urban Trends. Sonapat: Soutpoint School of Architecture.
- Sitte, C. (1889). *The Art of Building Cities*. Eastford, CT: Martino Fine Books.
- Solinis, G. (2006). *The Origins and Invention of Western Urban Design*. Diogenes (53, 01). Paris: P.U.F.

T

- Talen, E., Ellis, C. (2002). *Reclaiming the Search for Good City Form*. Journal of Planning Education and Research (22, 01). Thousand Oaks, CA: SAGE publications.
- Tasan-Kok, T. (2014). *Creating Spaces of Diversity from Spaces of Modernity*. Architecture (01, 01). Ljubljana: Raziskave.
- Taut, B. (1919). *Die Stadtkrone*. Berlin: Ullstein
- Tournikiotis, P. (1999). *Historiography of Modern Architecture*. Cambridge, MA: MIT Press.
- Trancik, R. (1986). *Finding Lost Space*. Hoboken, NJ: John Wiley & Sons.

V

- Venturi, R. (1966). *Complexity and Contradiction in Architecture*. New York, NY: MoMA.
- Vigano, P. (2019). *The Modern Project: A Research Hypothesis*. Urban Planning Journal (04, 03). Lisbon: Cogitatio Press.

W

Wang, F., Prominski, M. (2016). *Urbanization and Locality*. New York, NY: Springer Publishing.

Ward, K., Roy, A., McCann, E. (2013). *Assembling / Worlding Cities*. *Urban Geography* (34, 05). Oxfordshire: Taylor & Francis.

Wassenberg, F. (2013). *Large Housing Estates*. Oxfordshire: Taylor & Francis.

Whitehand, J.W.R. (1992). *The Making of the Urban Landscape*. London: Blackwell.