A model of ancient Rome and its influence on architectural form and function.

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After establishing that I wanted to base my project on architecture; I started to consider what aspects of architecture I personally liked. At the time, I was most interested in creating a graphical rendered design of a city portraying how its modern architecture has been influenced, or create a block model tackling this idea of the influences on contemporary architecture. I chose to look at Roman architecture because of its influence on the Neo-classical movement in the 18th–19th century and mostly their influence on our modern architectural form and function as they created our classical orders of architecture. I was inspired by reading John Summerson’s “The classical language of Architecture”. I conjectured that I would research the influences that the Roman Empire has had on modern architectural form and function, as I found that I was more interested in the more general idea of architecture and the function of a city, but I did not yet know how I would do this.

I then started to consider how I would explore this idea through a project and how to create a visual representation I thought about what would be the most effective way to do this. After researching different rendering software’s and graphical designing software’s I realised I couldn’t fathom how to use them as they were too complex, and the software’s were just too expensive. The average price for a good rendering software is about £360 which was above my project budget.

So, I decided to create a block model of a section of the Roman Empire that I think plays a crucial role in influencing contemporary architecture. My intention of creating the model was to manifest the evolution of architecture of the two different eras. The model clearly portrays the similarities in the function and form of the area around the Colosseum and the modern-day equivalent of an area around a stadium. Creating a block model would mean that there is less focus on the specific designs of the building and a more general focus at the whole model and how that area of the city is formed as well as how all the buildings can function together and why they were placed where they are.

I started the planning of the project by watching videos on how to build block models and how to create elevations onto models such as to create a hill. This was a suitable place for me to start as I have never constructed a model of a building before so I was learning a new skill by doing this that I believe I could most certainly use later as a future architect; It was also a good starting point because I could see how different model makers and architects create their models with different materials. Gaining some work experience at TSH Architects gave me the opportunity to see this in first hand which was a very helpful experience because I then understood the time and effort it takes to create a model built to scale.

1 Neo-classism and Neo-Classical movements http://architecture.about.com/od/neoclassical/a/What-Is-Neoclassical-Architecture.htm Accessed 12/03/16
3 Rendering software’s http://www.toptenreviews.com/software/multimedia/best-cad-software/
4 Model making http://thearchitectstake.com/work-news/why-we-still-build-models/
5 Building a block model in time lapse https://www.youtube.com/watch?v=MCLpg7opco8
6 Creating an elevation https://www.youtube.com/watch?v=xcPBzyulVZ4
I then started to research all the different dimensions of the Colosseum and all the buildings around it. This was initially a challenging task as a lot of the architectural plans of most of the residential buildings and backstreets were lost a long time ago, however many scholars have gathered artefacts that together helped put the urban plans of the city back. I recorded most of my initial sketches and calculations of all the
dimensions and construction in a planning diary that I used throughout the project to build the model and to understand and know where the buildings are in relation to one another.

I started by building a few draft versions of the Colosseum and some buildings surrounding it such as the Temple of Venus and Rome and the Flavian Palace. I initially started building this with foam board which was too thick to bend as the façade of the Colosseum is curved. By contacting professional model makers told me for some support on the project I was told that “if you were to create a smooth organic surface, you must use a smoother, softer material such as paper or cardboard”. So, my next attempt was to build a temple out of cartridge paper which was too unstable as a material to support itself so I had to compromise by creating a third practise model by building it with foam board initially then covering it with cartridge paper to give it that clean look of precision as well as a reinforcement. For the façade of the Colosseum and other buildings that required a curved surface, I just used cartridge paper to give that effect without the reinforcement of the foam board.

One of the main difficulties I faced when constructing the model was the accessibility of the materials and the quality of the tools I used. In How to Architect, Doug Patt mentions the tools and equipment needed to create architectural models, but because I had the wrong scalpel to start off with, I ended up with cut finger tips quite often. I then took Patt’s advise and bought myself an Exo-cutter with exchangeable tips so that the knife would never go blunt, I also purchased a cutting mat and metal ruler to be able to cut straight lines without having to cut through the ruler or affect the slice.

As I progressed through my project, I started to lose track of time so I devised myself a plan to follow up for 3 months. The aim of the plan was to set out my time so that I could complete my project before the Christmas holiday. It also helped me plan what buildings I wanted to construct next and in what order I would do this. So, by planning to build certain sections of the model each week, I could focus on taking my time to construct the models accurately, this also meant that I could leave the building of the Colosseum to the end because it would take longer making it as it is the most elegant and convoluting building in the model. When I came to build the Colosseum, I had to construct it 5 times before I was pleased with the result. The first two times, I hadn’t used the right materials, and the next two times I didn’t quite get the shape correct or acquire precise cuts as I was still using my old scalpel. The final time I had spent hours taking my time to cut the perfect ovals for the interior of the Colosseum and measure them each equally as I had proposed in my planning diary.

7 Dimensions of the Colosseum http://www.colosseum.net/listingview.php?listingID=4
9 Interview with Dr. Matthew Nicholls https://www.youtube.com/watch?v=dVBG4axOJDI

After building most of the model I realised that I had constructed some buildings in a way that they couldn’t fit the base, so I had to alter my plan and find a way to fix the minor error. I first had place all the buildings I made on the base of the model and figure out what parts of some buildings I had to cut off. I first lightly drew on the board the areas which were going to stay and had to slice off any section that was off the base so that I could fit everything on one rectangular base.
Whilst building the model I realised that there were a lot of empty areas where there would be residential buildings, markets and forums, so I decided to do some further research and find out roughly how these areas looked like and their purposes. Here I used most of the theoretical research that I had gathered up alongside my understanding of Roman architecture to try and recreate these areas, although these areas don’t have much significance in terms of the function of the model, they do strongly manipulate the form of the model by making it look more like a city and like a functioning model rather than just a model with a few big buildings. They also add perspective and size into the model by allowing you to see how big the residential buildings are in relation to the Colosseum or a temple. As the Romans, have created the idea of residential blocks, I thought it would only be justified if I included some of them in my model to portray the influence that Roman architecture has on the function of our city; As well as the form and layout of our cities.

Rome, ‘The Eternal City’ has provided the foundation of the modern western culture. During the period of 320AD, Constantine the Great had ruled Rome for 30 years, he was the first emperor to convert to Christianity, historian Michael Grant possibly best sums up Constantine’s building achievements by saying that Constantine’s prolific Church building programs and other buildings “amounted to an architectural revolution”. The way that our site plans are designed and our urban designs were based on the Roman grids, to split the city into sections; having residential blocks, public spaces, City Centres and, market places. This is portrayed in my model as I convey the idea of residential blocks and the arrangement of the buildings which are horizontally and vertically ordered.

The Roman Empire has had the biggest influence in architectural form and function. From the invention of roads, aqueducts, arches, and concrete that we use extensively. The function that our cities are based on is and probably always will be, what the Romans planned for it to be. A Capital city where all the government and central wealth is held, their idea was to have everything in one big city followed by its neighbouring cities of just farm land and residential areas. The Romans had an aim for Rome, the Capital city, was to be the centre of everything. However, today that’s not exactly the case. Today we don’t try and fit everything in one city, so we divide the country into areas in which some cities could be major trading areas, tourist attractions and farming land. In terms of form, Roman and Greek architecture are the foundations of classical architecture, which is now half of our modern architectural forms and designs. Roman architectural forms have had a significant influence on the designs we have but not necessarily our future designs. Architects are
now realising that dividing up the city into different areas such as malls, offices, apartments, and leisure centres isn’t good for the future; so, they are planning in bringing people closer to each other for society and for a united culture by building everything together rather than separate, so this ideal city the Romans designed, will soon be out of date. I believe that Roman architecture has had the biggest influence on architectural form and function all over the world in the past, but with the new architectural movements and ideologies, it will soon have been forgotten and not as important.


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