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# **THESIS STATEMENT**

For my thesis I am creating a virtual reality application in the form of an immersive labyrinth that allows for the exploration of spatial components that relate to an architectural experience. With the intent to disseminate the application to the public, the application will serve as an educational game that will allow one to experience and therefore understand how different combinations of spatial components create different architectural spaces.



The enlightenment of walking the labyrinth does not present itself when you leave or arrive at the center of the labyrinth. However it is the process of navigating through the labyrinth that rewards the individual. You learn by walking through not getting to the end.





Gamification within education is a method of learning that uses game based elements to drive the engagement of the user. This form of learning creates more engagement because it involves the user to make decisions and interact with the information presented.

An example of this is "choose your own adventure books". Choose your own adventure books create non linear plot lines that put the reader in charge of the narrative.

**GAMIFICATION** 

# RESEARCH



With the evolution of virtual reality gamification has also become a new method to aid in the process of architectural design. VR has successfully made it possible to recreate aspects of the real in a parallel virtual universe. With the evolution of VR architects and designers have a tool that has the capacity to generate, iterate, and experience designs before even physically building it.



Can getting lost within a labyrinth paradoxically create a clearer understanding of architecture?

Can the gamification of a virtual reality spatial labyrinth allow one to understand architecture better?

Can exploring and learning within a virtual immersive world allow one to understand the real world more clearly?



IMAGE ARRAYS IMAGE MAPS / MATRIX

# VIRTUAL REALITY LABYRINTH

matrix/ map



**IMAGE ARRAYS** 

Using Image Arrays as a methodology allowed for an easier and more interactive process of understanding different spatial conditions. The image arrays were iterated and presented to highlight comparisons of different spatial conditions within the images. The images are cropped in a way that focuses on the certain spatial element that is being compared.

















"Cathedral of Saint Mary of the Assumption" *Pietro Belluschi* "New National Gallery" *Mies van der Rohe* 



"Klaus Field Chapel" *Peter Zumthor* "Crown Hall" *Mies van der Rohe* 



matrix/ map



"Casa Batlló" *Antoni Gaudí* "Farnsworth House" *Mies van der Rohe* 







"Azulik" Jorge Eduardo Neira Sterkel

"Under" *Snøhetta* 



The selection of fifteen projects from image arrays are then placed within a matrix regarding their spatial atmospheres.









These selected projects are the end result of the labyrinth and they influence the abstractions that are aligned on

their path.





MAP

### OUTCOME

### TOWARDS & NEW ARCHITECTURE

could afterwards see for himself with his own eyes. The could anter has not taken into account the architectural elements of the interior, that is to say surfaces which are linked together in order to receive light and make manifest the content of the building. He has not thought in terms of space, but has made stars on paper and drawn axes to form these stars. He has dealt with intentions which do not belong to the language of architecture. He has transgressed the rules of proper planning by an error of conception or an inclination towards vanities ST. PETER'S AT ROME : Michael Angelo constructed the ence.

mous dome surpassing everything that had been seen till then; immediately on entering you were under the immense cupola. But the Popes have added three bays in front and a great vestbule. The whole idea is destroyed. Nowadays it is necessary to traverse a tunnel more than 300 feet long before arriving a the dome; two equivalent masses are in conflict; the effect of the architecture is lost (and with its decoration, conceitedly coarse, the fundamental fault is enormously increased and St. Peter's remains an enigma for the architect). Santa Sophia at Constantinople is a triumph with its superficial area of about 7,500 square yards, whereas St. Peter's covers an area of more than 16,000.

VERSAILLES : Louis XIV is no longer merely the successor of Louis XIII. He is the ROI-SOLEIL. Immense vanity! At the foot of the throne, his architects brought to him plats drawn from a bird's-eye view which seem like a chart of stats; immense axes, formed like stars. The Roi-Soleil swells with pride; and gigantic works are carried out. But a man has



only two eyes at a level of about 5 feet 6 inches above the ground, and can only look at one point at a time. The arms of the stars are only visible one after the other, and what you have is really a right angle masked by foliation. A right angle is not a star; the stars fall to pieces. And so it goes on : the steat basin, the embroidered flower-beds which are outside the general panorama, the buildings that one can only see in fragments and as one moves about. It is a snare and a delusion. Louis XIV deceived himself of his own free will. He transpresed the truths of architecture because he did not work with the objective elements of architecture.

And a little grand-ducal princeling, a courtier, like so many others, of the glory of the Roi-Soleil, planned the town of



Reflecting on my college career I had the most difficulty using readings and text to understand buildings as I was more of a visual learner. With the evolution of imagery and technology this application, once available on the oculus headsets, could become a new tool of teaching architecture. By using a gamified immersive virtual reality labyrinth students will now have a new method of learning. A method that will allow for a clearer understanding of spatial components within architecture by experiencing it rather than reading about it.