# DIGITAL MISRENDERS

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## HOW IT WORKS

01 // Capturing the Object //
To be within range of the camera to properly capture the volume, select a building 3 stories or smaller around which you have free range of motion. Take approximately 80-200 high quality photographs with as much range around the volume as is possible with the site. For taller buildings, use a ladder to capture the upper volumes of the building.

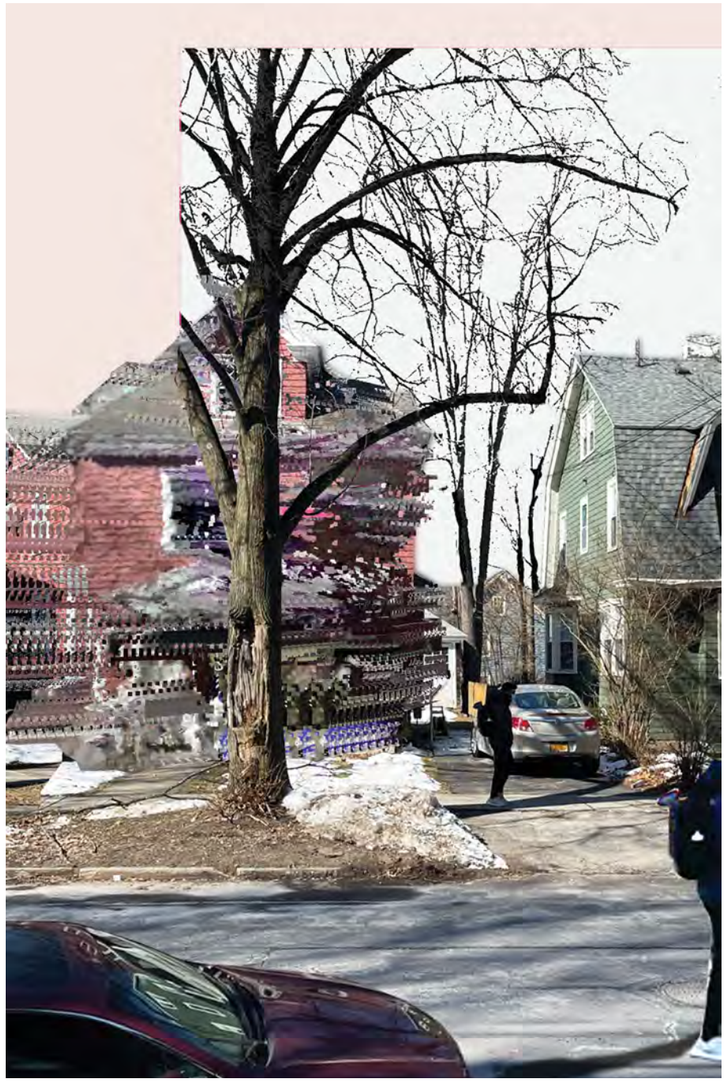
02 // Modeling the Object //
Use a point cloud based photogrammetric modeling software to model your images into a mesh. This process will require the alligning of photos and removal of details like trees and snow which will confuse the geometry matching.

03 // Animating the Object //
This process will allow for an extractable image. Animate the object so that it moves dramatically across the screen and there are multiple instances of different formal elements/geometries being moved and featured. Such that, when the clips are played next to each other, the end clip and start clip have different slide images.

04 // Misrendering the Image //
Randomly organize the animated clips such that the movement of the object is different from the start clip and end of the succeeding clip. Datamosh the animation using a hex code editor to delete “I” frames and manipulate “delta frames” in desired locations. Repeat process until satisfied with the misrendered image.

05 // Mapping the Image //
Extrapolate the misrender using your preferred imaging software. Remap the misrender into its orginal context and apply the collage to depth map of the photogrammetric model to create a 3D image.

06_BEALE ST



03_LANCASTER AVE

*The following images were created by glitching an animation of a photogrammetric model. For the glitch to emmerge in the coding process, dramatic motion between clips was required to stun the pixels in transition to each frame. Thus, the definition of a photogrammetric animation was required to acurrately depict the building and control its movement across the screen.*

07_BEALE ST

*The glitches were then rerendered back into their original context. These images shown are the converted 3D images (flattened in publication) which would allow for the viewer to see the spatial confusion and implications that could be implied through the glitch of architectural form.*

THESIS STATEMENT...

With the help of Artificial Intelligence, digital images have the potential to become a method of design generation, working alongside the architect to confuse and produce new digital realities.

This thesis attempts to explore the dissonance between our digital imaging technologies and the realities they seek to emulate, in order to discover the design productivity that emerges from the building and the breaking of a coded file.

THE CONCEPT

We live in a world hyper-saturated with imagery delivered to us through the machinic lens. In this postdigital realm, where our everyday tasks are dominated by digital mediation, we are no longer designing constructed artifacts. But rather, we are designing conditions in which design futures can develop.

03_LANCASTER AVE

## DIGITAL DOCUMENTATION



Images delivered through this machinic lens are often more proliferated than the reality they imitate. Therefore, the power of portraying a truth lies in the image, which can easily be mediated for deception, as can be seen in these examples of misunderstandings created by Google's software's where people trusted the digital image over the reality before their eyes.

Architects must grapple with this simulacra-esque interpretation of the built environment; to do so, we must understand the components that build this perversion of reality.

Digital imagery is proliferated more than the objects it seeks to simulate. This is due due to three factors: their omnipresence, rationality and meta-realness.

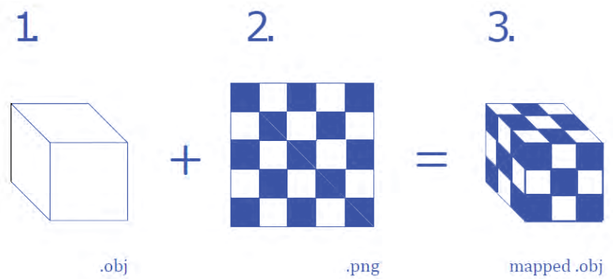
Digital images are omnipresent between screens, phones and personal technologies. They are often more easily accessible and disseminated than the reality they represent.

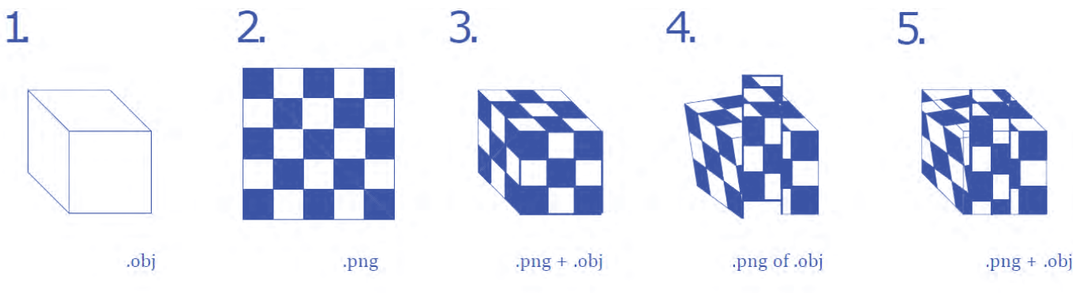
They are rational and faithful enough in technique and execution, that its interface can be understood throught the same ration standards as reality.

Lastly, they have components of the meta-real, the imagery is close enough to reality to emulate it and convey its logics, but different enough that we don't second guess mistakes from the imaging software's outputs. The tell-tales and misrenders are explicit and easily underestimated. With this percieved transparency, trust in the images is maintained.


09_JAMES ST

*Architecture is no longer solely about materials and literal construction of an object, but rather, image and the surface on which it is applied to. As can be seen in how rendering software's utilize the techniques of texture maps. This thesis takes advantage of the discordant forms the image can imply and finds new means for corrupting and reapplying the image back onto the surface in ways which are subversive to the realities of the object it is paired with.*





*The methods of creation for our digital architectures, particularly those on Google Earth, involve low resolution poly models which keep file size low and act as an anamorphous building-like shape for graphing on the discernable data. The high resolution image is then graphed onto the model to imply texture, materiality and architectural definition. Which results in models where the image is doing most of the work in portraying applied objects and form.*

05_WAREHOUSE

This creates a dynamic between the object and image, where when properly mapped can accurately represent the realistic nature of an object. But, when done improperly or with a misrendered image, creates discord between form and perception.

This thesis takes advantage of the discordant forms the image can imply and finds new means for corrupting and reapplying the image back onto the surface in ways which are subversive to the realities of the object it is paired with.


04_CAYUGA ST

*" Exploiting the modes of imaging an existant context creates a dynamic between estranged opposition and imitation. Between these exists design possibilites by exploiting the nature of imaging. One can compare the differences of the estranged object while also being convinced of it having always been there."*

*MAYA ALAM*
*"Schinkel-ish: Fragmented Vernacular versus Void*

Philosopher Jean Baudrillard asserts in his work "Simulacra and Simulation" that there are four stages underwent for the subversion of an image, symbol, or media. This subversion results in the imitation of real world logics and the final deletion of the original.

Phase 1:
Faithful Imitation. The object at question is re-rendered with qualities seeking realism to the existant conditions.

Phase 2:
Perversion of Reality. Signs of unfaithfulness emerge as the object mutates into something other.

Phase 3:
Pretends to be Faithful. The unfaithful object erases naratives of its object of imitation and insists a new reality.

Phase 4:
Complete Simulacrum. The object at question is completely mutated with no memory of estrangement.

Fundamentally, imaging as a method has always been essential to the distribution of architecture and architectural ideas. The only difference now, is the omnipresence of these images, even to the point where they are better known than the built object.

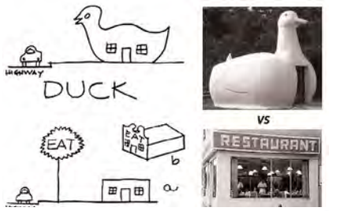
Architects have been toying with the ideas of surface, form and image as three seperate effects that can either work in unison or subversion to one another.

The delamination from form and application of imagery is what unites all of these precedents. Imagery itself is what becomes the signage of the decorated shed.

## ON IMAGING . . .

1*

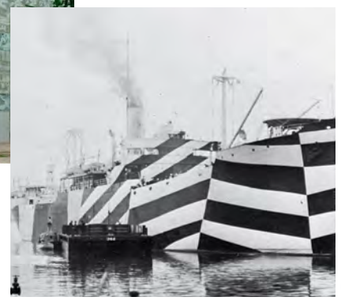
2*




3*

4*

5*



6*

*1* Markthal, MVRDV, Rotterdam, NE. 2014.*
*2* Learning from Las Vegas, Robert Venturi, Denise Scott Brown and Students. 1972.*
*3* Duck vs. Decorated Shed, Lessons From Sin City, Venturi, Izendor and Brown. 1977.*
*4* Facade Construction of San Pertronio, Bologna, Italy. 2018.*
*5* 15 Eberswalde Library, Herzog and DeMeuron, Photocollage, 1998.*
*6* Dazzle Camouflage, "Razzle Dazzle Ships,"1918.*

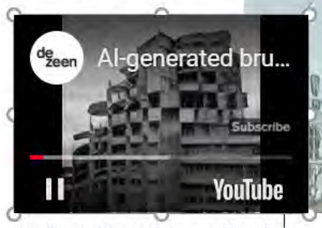
## ON DIGITAL IMAGING . . .

DIGITAL AESTHETICS

DESIGNER GENERATED

COMPUTER GENERATED

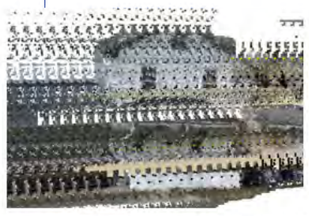
*Maya Alam, Virtual Berlin | Visual Studies, 2016.*




*Moullinex's Video of AI Generated Brutalist Buildings. Lisbon, Portugal 2020.*

*Animal, L'architecture Comme Michael Casey Rehm,*

*Michael Betancourt, the Kodak Moment, 2013.*

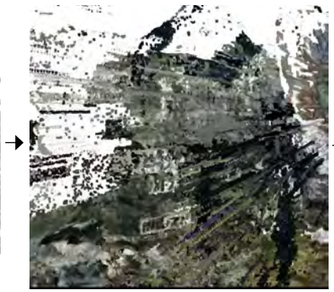


*Digital Misrenders Production, 2021*

THE EROSION OF FORM THROUGH MULTIPLE PASSES OF THE IMAGE

NO.1

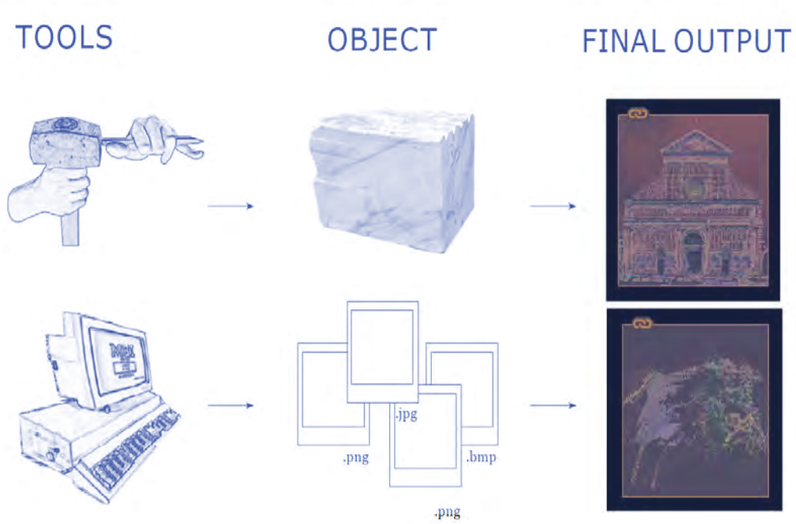
NO.2



NO.3

Our perception of digitally produced images lies between a spectrum of digital aesthetics which draw to question the role of the architect or the computer as author. The misrenders produced seek to align themselves between the possibilities of what experiments can be extracted by the hand of the designer and the algorithm of the machine.

Mario Carpo, the architectural theorist asserts that the process of allowing the computer to take multiple passes at an image, gives the machine agency and the same authorship of method Alberti once argued applied to the hammer and chisel in shaping marble.

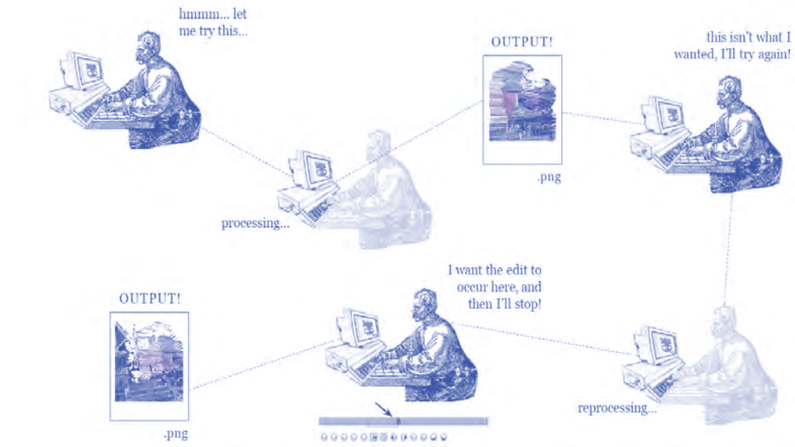


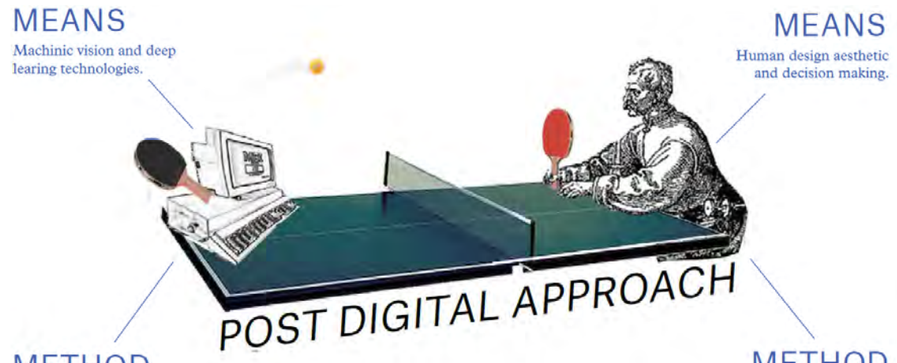

The status quo this thesis attempts to challenge is the notion that the computer is the sole means of digital production while the designer is the sole author. The post digital challenges these notions of authorship, as the reality shows that the process undergone in contemporary design involves the mediation of human inputs with digital outputs.

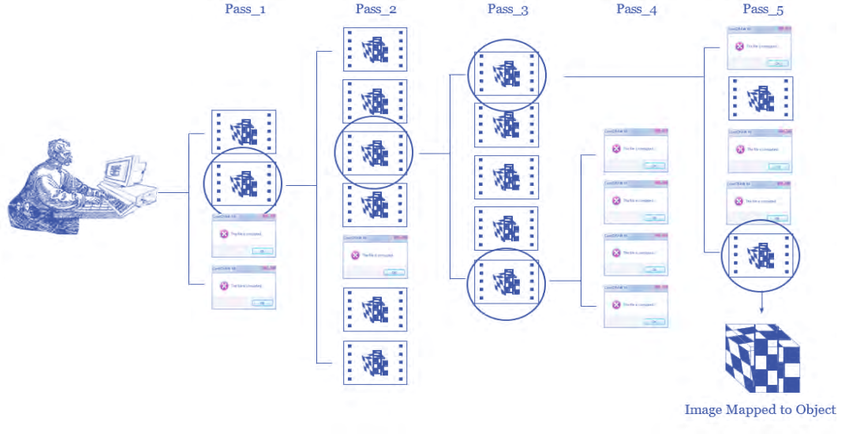

Now the architect interacts with media in a ping-pong like back and forth with the machine and softwares they are in collaboration with. This potentially infinate feedback loop allows the designer to choose the degree of digital mediation and select their preferred digital outputs.







Theorist John Frazer states that “Virtual worlds should not be seen as an alternative to the real world, but rather, as an extra dimension which allows for a new medium of expression”. This extra dimension allows for a new mode of architectural authorship and aesthetic experimentation, especially when through the glitching of files.

In conclusion, our creativity is no longer bound to traditional representation standards of our field...

THE ARCHITECT:

THE VIEWER:

We can use the digital realm to augment and recodify new environments and aesthetic possibilities as images hold the power for rendering and misrendering architectures. The digital image is no longer just for rendering but is now for creation.