May 2020

New Ruins

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NEW RUINS

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Fine Arts
Visual Art

by
Jordan Fowler
May 2020

Accepted by:
David Detrich, Committee Chair
Dr. Beth Lauritis
Todd McDonald
ABSTRACT

New Ruins is an exhibit of sculptures that integrates physical, natural, digital forms and materials. These works are constructed as ruins of the future, involving materials and systems that carry concerning implications for tomorrow.

I demonstrate two main bodies of work through this investigation. Re-encodings display large-scale assemblages of concrete, foam, organic matter and mechanical detritus with projection map glitched digital video animating their surfaces. Additionally, Generative Ruins are a series of 3D printed sculptures modelled through algorithms that parameterize and procedurally generate ruins.

Because the presentation of these works echoes the display of archaeological finds my sculptures have a temporally dislocated quality. The incorporation of aesthetic influences from the capriccio of 18th century landscapes to Brutalist architecture to science fiction provides further visual and narrative entry points for the viewer to read my work.

The works in this exhibit are specifically oriented to investigate the agency of digital forms and systems, an inherent quality of digital content which mediates an increasing amount of our interactions. I believe we are often blind to digital agency due to our positioning within such deeply integrated digital forces. Through this body of work, the viewer witnesses digital agency as a significant mediator between the way we perceive nature, material, and space. New Ruins constructs this perspective by utilizing the ruin as a format to decontextualize and re-encode physical and digital forms. I exhibit
the essence of digital agency through these ruins that experimentally question the threshold between physical and digital space.

Building upon the ideas of New Materialism and Posthumanism, my research is in conversation with theorists such as Jane Bennett and Timothy Morton that acknowledge non-human agency in objects and systems. My attribution of agency to digital forms and systems is informed by Gilles Deleuze, specifically his work on the rhizome. Aesthetically and conceptually, New Ruins is influenced by the artistic practices of Peter Buggenhout, Mark Dion, Rafik Anadol, and Giovanni Batista Piranesi.
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CHAPTER ONE

INTRODUCTION

In New Ruins, a series of sculptures that merge physical, natural, and digital forms and materials, I construct a vantage point from which we are able to witness and evaluate an underlying power in digital forms and systems. I refer to this power as digital agency and feature it as an inherent condition of digital structures that operate with or without human intervention. Through this body of work, the viewer witnesses digital agency as a significant mediator between the way we perceive nature, material, and space. New Ruins exhibits this perspective through large scale projection mapped sculptural assemblages and procedurally generated ruins fabricated as 3D printed sculptures. I apply the ruin as an artistic process to erode contemporary objects and systems. The materials, processes, and forms I erode result in ruins that destabilize the threshold separating physical and digital space. They prompt the viewer to consider the extent to which we are digitally integrated. I believe we are inherently blind to digital agency due to our position within a growing ecosystem of digital forms and systems, the integration of which outpaces any stable understanding of their implications.

I fabricate imagined ruins composed of a high degree of digital elements; through which I signify that digital systems highly effect our world both structurally and residually. Like architectural ruins, digital forms and systems are able to be ruined. Through file corruption, compression, encoding, outdating, glitching, digital elements can decay and erode in ways that are reminiscent of physical ruin. Additionally, generative digital systems can grow, evolve, and adapt; and these traits mirror nature. I leverage new
ways of exploring digital forms and systems, understand the underlying logic that makes and breaks them, and integrate their presence into an existing aesthetic tradition of ruins.

My sculpture installation borrows from existing conventions in the presentation of archaeological discoveries often employed to display ruins and fragments. Through the format of an archaeological display, New Ruins orients the viewer to see them as artifacts of a different time. They are framed as objects of study and preservation to provoke reflection in the viewer and to stimulate a connection to the integration of digital systems in our current time. The prospect of future ruins is thematically science fictionesque, as is the granting of agency to digital elements. These sculptures aesthetically indulge in the genre and utilize it as a familiar format to deliver content. Additionally, New Ruins encapsulates a range of aesthetic inquiry from the architectural capriccio in historic landscape painting to decaying Brutalist Soviet monuments.

My research builds upon theories of New Materialists like Jane Bennett and Posthumanist Timothy Morton that acknowledge non-human agency in objects and systems. Also, the way in which I am attributing agency to digital forms and systems is informed by Gilles Deleuze, specifically his work on the rhizome. This body of work is inspired by the artistic practices of Peter Buggenhout, Anselm Kiefer, Mark Dion, Rafik Anadol, and Giovanni Batista Piranesi.
CHAPTER TWO
DIGITAL AGENCY

What I refer to as digital agency is a consideration of the power held in digital forms and systems as an inherent condition that operates with or without human intervention. The advancing state of digital infrastructure consisting of the internet, smart devices, mass data harvesting, and applied artificial intelligences mediate an increasing amount of our behaviors and beliefs. For example, it is now more difficult to tell if we just received a call from a human or a machine. High frequency stock trading is handled by increasingly intelligent artificial intelligences at inhuman speeds. Warehouses are emptying physical goods to make room for digital infrastructure to mine cryptocurrencies. These real-world situations demonstrate that digital forms and systems can possess great power. Attributing agency to something digital or any other non-sentient material is a method of accounting for interactions and systems on a scale that outweighs the decision-making, intentions and power of individual people. The difficulty in clearly witnessing digital agency is due to our position within and amongst these digital situations. Seeing this condition requires decontextualizing digital forms and systems, or else this power is hidden in the context of familiar digital interactions. The method I use in this body of work to provoke the viewer into seeing digital agency is to decay recognizable digital and physical systems through the creation of ruins. Ruins create decontextualized abstractions of original forms and systems. I’m applying the same function to digital entities to render an abstract view of digital agency in order to make it visible, as opposed to being contextually camouflaged.
New Ruins visualizes digital agency by destabilizing the viewer’s perspective of digital forms. This is achieved through experiments in layering projections of digital content over physical content as a comparative exercise that demonstrates differences in the inherent material properties of digital and physical mediums. I use this process in sculptures I refer to as *Re-encodings* (Fig. 1 – 3), large sculptural assemblages consisting of projections and a mixture of physical and digital materials. In addition, my works demonstrate digital agency through 3D printed, autonomously generated ruins. These are created by parameterizing an artistic approach to designing ruins and imbuing a computer with the ability to mimic my own pursuit of creating ruins. By imbuing a generative system with a high level of decision-making in imagining new forms, these sculptures evoke the power of a digital system’s ability to contend with human creativity. These forms which I refer to as *Generative Ruins* (Fig. 4 – 19) are digitally “grown” through this system and are physically fabricated as 3D prints.

My perspective of digital agency resonates with the work of New Materialists, who posit agency in non-human entities as a means of accounting for their inherent power. This is in part derived from Jane Bennett. Her work, *The Force of Things: Steps Toward an Ecology of Matter.* 2004, builds upon theories of Thoreau, Spinoza, and Deleuze to acknowledge the “thing-power” of non-human entities.¹ For Bennett, the application of a thing-power to non-human forces serves as a method to foster an intelligent approach to ecological intervention in the Anthropocene.² I’m adopting this

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¹ (Bennett, “The Force of Things,” 348-349)
² (Bennett, “The Force of Things,” 349)
understanding and applying it to digital entities for the sake of imbuing in the viewer an increased awareness of the power that digital agency possesses in mediating our lives. These systems have the ability to act, resist, decide, and play a vital role in the way our world functions. Consider the internet as the most massive of these digital systems. Bennett implies that materiality is too close for humanity to see clearly, a statement that aligns with my claim of an inherent blindness we possess to clearly seeing digital agency. This closeness of materiality addresses our positioning within and amongst these systems. In respect to digital agency, we are within vast digital ecosystems, entangled within them, blurring any clear separation of where digital agency and human agency begins or ends. This obscurity is itself part of the thing-power of digital systems.

I demonstrate the thing-power that Bennett alludes to as a component of digital agency through both animated digital projection and autonomy. This live digital content is a feature of the Re-encodings. The viewer is poised between interpreting the projection mapped surfaces as emanating from an object or cast from a projector. Distinguishing between the two possibilities is further confused by the source of autonomy as the computers controlling the projections are hidden. Additionally, the projected imagery reanimates the otherwise dead structure in a way that suggests a different type of “life”. This interpretation of “living” is confused by the dimensional obscurity of digital things, their ability to linger, loop, and transmit in a timeframe different than physical forms. Thing power as described by Bennett is consistent with digital agency as seen through Re-encoding’s digital materials ability to reanimate the static and force within the viewer a reinterpretation of the source of the projections. Generative Ruins also demonstrate
Bennett’s thing-power through procedural generation. As the artist, I am the creator of
the algorithm, and editor of the resulting forms that are produced. The vast majority of
the designing, composition, and form are determined by the computer, demonstrating a
creative power. I used the algorithm of *Generative Ruins* to produce sixteen pieces for
this exhibit to show that the system wields power in repetition. It can be run constantly if
desired, building new forms in an endless loop.

As I mentioned previously, digital agency is difficult to discern because of our
position and entanglement with these digital systems. However, it is not just our position
within these systems that contribute to difficulty in discerning digital agency, it is also the
incomprehensible magnitude and dimensional obscurity that digital systems exhibit. In
terms of magnitude, consider the internet again; how large is it? How does one even
measure it in relatable terms to physical magnitude? To address its dimensional
obscurity, what does the internet look like as a physical map? Can it have an end or
beginning? Most importantly, what are the implications of not fully understanding how
this structure, shaped by humans, now shapes us? It is like trying to resolve the shape of a
blooming flower by individually reading strands of DNA; we are dimensionally limited
in visualizing it. These thoughts allude to the work of Timothy Morton, who describes the
interactions among objects and systems from a Posthumanities perspective in his work
*Hyperobjects: Philosophy and Ecology after the End of the World.* 2013. Morton refers to
hyperobjects as things that are massively distributed in time and space so as to be
inconceivably vast to humans.\(^3\) He attributes this term to objects that exist on profoundly

\(^3\) (Morton, “Hyperobjects,” 1)
different time frames than humans and have implications that extend beyond the existence of the material itself. Digital forms can be infinite in possible lifespan, yet increasingly miniscule in size. In fact, digital things are not bound to any particular scale, timeframe, or location. An email, search engine, social media page, or app is virtually multiplied in potentially millions of different locations depending on concurrent users. In contrast, an inconceivable mass of digital detritus lingers in dead spaces of both massively distributed systems like the internet and tiny dispersed devices like flash drives. I allude to a hyperobjectian perspective of digital agency through addressing the dimensional obscurity of digital forms in my work. As stated previously, the digital projections of *Re-encodings* reanimate an otherwise dead structure in a contrasting relationship that speaks to the “life” of digital things. *Generative Ruins* suggest an endlessness and vastness in creative form from a system that doesn’t occupy physical space.

In addition to Bennett and Morton, my postulation of digital agency is informed by Gilles Deleuze’s *A Thousand Plateaus: Capitalism and Schizophrenia*. 2018. I was initially drawn to Deleuze’s rhizomatic theory as I was exploring rhizomatic structures as an organic form in ruins. When the rhizomatic nature of vines and roots interact with abandoned architecture, their structure becomes magnified by their displacement within a built environment. These organic structures traverse abandoned architectural spaces in pursuit of a balance between their physical positioning amongst human structures and the need for light and moisture. My initial interest in this condition was primarily formal; I’m

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4 (Morton, “Hyperobjects,” 47)
fascinated by the collision of systems in ruins. This interest was also manifest in early
version of the algorithms of *Generative Ruins*; I not only wanted to understand them as a
form, but a logical system. Deleuze’s work introduced me to the Rhizome as a theoretical
structure. The Rhizome models connections between materials, forms and systems in a
way that harmonizes with the posthuman and new materialist positioning I am operating
from. The rhizomatic structure is a dismissal of hierarchical arborescent structures of
organization. By organizing matter according to connections rather than hierarchies, the
rhizome fits the perspective of a non-human centered interpretation of being.\(^5\) Applying
agency to non-sentient things including digital forms, relies on a rhizomatic structure of
interconnectedness. The elimination of a hierarchy dismisses the supremacy of human
agency over all things. In other words, the agencies, powers, and actings of things can be
modeled as a rhizomatic network of interconnections with humanity included that reveal
conditions not able to be seen from a human centered perspective, a perspective which is
dimensionally limited.\(^6\) I’m asking the viewer to orient their perspective of digital objects
and systems as an independent set of forces, separate from the extension of human intent.
Though we are entangled with digital forces and mutually dependent, digital objects and
systems possess great power and acknowledging this agency offers us a greater means of
understanding their implications.

\(^5\) (Deleuze, “A Thousand Platreaus,” 16)
\(^6\) (Deleuze, “A Thousand Platreaus,” 21)
CHAPTER THREE
FRAMING RUINS

Ruins are themselves an artistic medium, wrought by humans, nature, and time. They are forms through which we can witness human intention and nature engage in collisions, harmonies, and a variety of states in-between. Fragments and assemblages offer us an opportunity to see experimental exchanges between systems left in isolation from human intervention. For example; a plant bores its way between seemingly impenetrable ancient architectural blocks; a system of vines keeps a column from tipping over; the inside of an abandoned industrial cooling tower miraculously houses a mini ecosystem. I find ruins spectacular for their ability to demonstrate these unique situations. Through this body of work, I apply this appreciation of ruins to digital forms and hybridize it with historical conventions in ruin representation.

New Ruins incorporates aesthetic influences from a variety of art historical eras and trends. The practice of rendering ruins is most memorably associated with Romanticism which evoked the sublime nature of ruined spaces. Romantic artists didn’t just render observed ruins; they exaggerated them and often fabricated them as fictional subjects. The aesthetic treatments of romantic ruins still prevail in contemporary representations. Both today and in recent decades, science fiction has invented ruins in depictions of the future. Often stylistically influenced by Soviet Brutalism, future ruins are paired with dystopian narratives. These depictions are most notably conveyed in films and video games. The sculptures of New Ruins utilize aspects of these aforementioned genres. In exhibiting these ruins, I present them as a collection of artifacts displayed
within steel frames, echoing an archaeological mode of presentation to orient the viewer to view them as such.

My use of ruins in this body of work is primarily rooted in my long-held fascination of these decaying structures. However, I also utilize ruin as an artistic tool; ruin simultaneously abstracts both the material and context of subject matter. Ruin is therefore a process of decontextualization. The eroded, patinated, and fragmented forms of ruins are a type of abstraction from the original intent of the structure. These processes result in what can be viewed as formally fascinating sculptures; we can appreciate them as a combined process of abandoned human intent, natural processes, and time. Ruins also abstract the existing context, understanding, and previously held notions of a structure. It instills in the viewer a chance to feel the essence of the systems that contribute to the ruin. The lack of information in a ruin can be thought of as a type of meditative lens, a clear mind unobstructed by the overloaded signifiers of a whole structure which immediately bury the essence of the systems at play underneath contextual distractions. Sculptor Peter Buggenhout is a great example of how sculptures can be decontextualized through ruin. His work is seemingly ruined to the point of eliminating any observable association through form. To contribute to this lack of association, Buggenhout applies thick layers of dust that further shroud any formal or material connections. Buggenhout describes his materials as abject everyday objects detached from their original context. I employ techniques with a similar intent to Buggenhout’s dust layers. By sculpturally blending forms across materials, the Re-

\footnote{\textit{(Witocx 2015)}}
encodings of New Ruins decontextualize objects by fusing into abject conglomerates. For example, when the guts of an inkjet printer, chunks of Styrofoam, insulation, and vines sculpturally merge, the entry point of content analysis is confused. My intention is not to just dissolve the associations of materials which Buggenhout aims to achieve through dust. By entombing the Re-encodings with layers of cement, I bolster the decontextualizing power of sculpturally merging forms while also overwriting them. This process is further elaborated in the proceeding chapter, Re-Encodings.

What separates a ruin from my invention of a new ruin, is the inclusion of digital forms and systems. We are surrounded by digitally augmented objects, systems and spaces. Digital forms can exist as both objects produced through digital manufacturing methods or virtual objects that do not define physical space. Digital forms and systems are able to be ruined, like the traditional ruin. Through file corruption, compression, encoding, outdating, glitching; digital elements can decay and erode in ways that are reminiscent of physical ruin. Additionally, generative digital systems can grow, evolve, and adapt, traits that mirror nature. While digital decay and growth reflect qualities already present in the ruin, time and space function very differently. Digital elements can change instantly, loop, or recursively wind and unwind. Though we record time as linear, time can be suspended and/or inverted with digital forms as they are within a system that can simulate or ignore time. Space is problematic; digital forms can both be volumetric and flat depending on the way they are rendered. They can be physical or virtual, or both in the case of the works in this exhibit. As mentioned in the preceding Digital Agency chapter, the difficulty in addressing digital agency stems from our position within and
amongst digital forms and systems. Ruins, with their ability to decontextualize, offer the ability for digital forms and systems to do just that. By decontextualizing and stripping the signifiers of familiar digital content, ruin is used in this body of work as a tool to transmit a glimpse of digital agency to the viewer, otherwise obscured by both our position and the dimensional obscurity digital forms possess.

In constructing a perspective of digital agency through ruins, I use aesthetic influences of from a variety of sources as a familiar insertion point to reading the work. I am primarily informed by Romantic and modern Soviet Brutalist ruins and depictions of future ruins from contemporary science fiction.

Ruins become a focal point of artists in the 18\textsuperscript{th} century, when Romantic era painters rendered, exaggerated, and invented ruins in picturesque compositions.\(^8\) I draw inspiration from Romanticism for the successful communication of the sublime in ruins. As ruins of a hypothetical future, my work instills both an intrigue over something that does not yet exist but also a degree of terror. The sublime is provoked by placing hypothetical ruins ahead of us as a tangible set of objects, forcing the viewer to contend with thoughts of a destroyed future. The impending doom of New Ruins is counter-balanced by an alluring synthesis of light and form as projections animate across the cryptic forms of the \textit{Re-encodings}. As lustrous copper forms, the \textit{Generative Ruins} even further depart from the terror of a destroyed future pointing to something more utopian. Romantic artists also alluded to a utopian sensibility of grand pasts through the embellishment of observed ruins. The \textit{Generative Ruins} chapter explores Romanticism

\(^{8}\) (Zucker, “Ruins,” 122)
further with the work of perhaps the most renowned of romantic ruin artist, Giovanni
Batista Piranesi. Generative Ruins are not only an exercise in aesthetically encoding
ruins, but also a critique of the artificial nature of romantic era representations.

I use aspects of a brutalist style for its connection to bold ancient structures and its
dystopian sensibility. Brutalism stylistically combines the aims of the technologically
progressive mindset of modernism with the raw power and stability of ancient structures.
The elements that still stand in ruins from ancient structures, like columns and reinforced
walls, are emboldened as main architectural features in this style. In combining these
features with modern concrete, there is a sense of permanence and impenetrability. This
is also in part due to infrastructure of both world wars, which involved massive concrete
bunkers and fortresses which too became ruins. Brutalism carves architecture into
functional geometric units, eliminating ornate details and materials. This distillation of
functional form also aesthetically refers back to the ruin in its eroded state where only the
elements functionally essential to its structural integrity remain. My sculptures in New
Ruins evoke a Brutalist aesthetic through the use of abstracted, and fragmented functional
forms. Specifically, in the case of the Re-encodings, the amalgamated foam and
deconstructed computer components evoke the sense that their sculptural forms are
determined by specific functional roles. This formal parallel to Brutalism is also
reinforced by the blocky and geometric style of these materials. The thick layer of
concrete that coats Re-encodings is an additional signifier for Brutalist inspiration, as it
coats the entirety of these works, which is often the case in Brutalist architecture.
Brutalism is often paired with the failed utopian ideals of Soviet socialism. Its eventual failure as a political system resulted in Brutalist monuments and architecture being recontextualized as symbols of dystopia. Ironically, an architectural style that references ruins has been recontextualized by some of the most notable structures of that style becoming actual ruins. New Ruins frames a glimpse of a future that evokes a dystopian condition, but it is not my intention to convince the viewer that our future is going to be a dystopian world. I am instead using dystopia as a familiar perspective from both a real political context and heavily utilized setting in science fiction. This is a mode that is both entertaining and foreboding. Brutalism, and in particular, Soviet Brutalism, with its recontextualized position as a facet of dystopia, permits my work to communicate a sense of foreboding urgency in addressing digital agency.

New Ruins also evokes a heavily science fictionesque aesthetic; this in part due to the presence of Brutalist architecture in science fiction to convey dystopian narratives. Science fiction is also aesthetically communicated through the use of technologies in ways that challenge our familiar understanding of them. Projection mapping and procedural generation of complex forms are relatively new advances in studio art practice, both of which are creatively utilized in New Ruins. The projection maps of the Re-Encodings don’t just attempt to display this technology but obscure it as a strange extension of the reach of digital forms. The sense of autonomy in the system of projection aligns with countless science fiction narratives that deal with autonomous digital entities. Generative Ruins takes this dynamic much further with the creative process of designing a ruin almost exclusively through the agency granted to a digital system. What is perhaps
the most considerable alignment of New Ruins and science fiction is the narrative function. My work deals with future ruins, but the purpose is rooted in the present. Science fiction is a complex genre that isn’t always conveying a future for the sake of depicting the future. Often, it is a format for critiquing the present. Placing a narrative in the future loosens our critical examination of realism, thus allowing contemporary subject matter to be contextually disguised and inserted. In other words, science fiction can be used to defamiliarize and restructure the experience of our own present. New Ruins do this as a means to expose digital agency. By fictionalizing future ruins, I am placing a mirror to the present, inviting the viewer to see how this body of work reflects our present condition.

I’m presenting New Ruins as a collection of artifacts to reinforce their context as ruins and temporally separate them from our present time. Within the gallery space, open vitrines and thin steel frameworks encase and prop works, interrupting a natural resting position of the sculptures within the gallery. There is the impression of a sterility in this detachment via the vitrine, a need for an interface between the fragile preserved ruins, and the gallery. This style of presentation mimics the display of historical relics, thus positioning these sculptures as such. From a formal perspective, the framework composes a heavy contrast. The rationality of the gallery space and orthogonal line work of the frames is set in opposition to the entropy of destructed forms and glitching data. My utilization of the frame is inspired by Anselm Kiefer. I am specifically inspired by his “Kiefer Rodin” series in which he utilizes the vitrine as a curatorial device and sculptural

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9 (Jamesos, “Progress Versus Utopia,” 151)
object itself. Kiefer uses the vitrine to bring together objects that react with each other or against each other. Specifically, a range of iconographic materials are combined with the abattis of Auguste Rodin to create experimental collisions of the recycling of history and substance. Like Kiefer, I am utilizing the vitrine as a format to frame an experimental assemblage of physical and digital materials. Kiefer’s use of the vitrine draws reverence and deep introspection to the rich material associations of the content within the frame. I use this format for a similar goal; so that the combination of foam, vines, machinery, cement, and junk to invite a level of reverence and inspection reserved for relics and historically rich objects. By inserting New Ruins into open vitrines, I’m suggesting to the viewer that they are in the presence of historically important content; however, the biggest difference is that these events haven’t happened yet.

10 (Petersen 2018)
CHAPTER FOUR
RE-ENCODINGS

New Ruins features three large scale sculptural assemblages consisting of a wide variety of materials both physical and digital; I refer to these as Re-encodings. The works Conduit (Fig. 1), Inosculcation (Fig. 2), and Datafall (Fig. 3) are similar in material and process, but vary in composition and subject matter. Featuring forms reminiscent of something architectural and mechanical, these assemblages imply functionality but remain ambiguous. This look is achieved through layering and blending foam packaging and deconstructed machinery such as computers, printers, and appliances. In addition to these implied functional systems, organic systems are inserted as vines, roots and branches. These organic forms often mimic or coalesce with the functional forms by blending into wires, plugging into circuit boards and grafting to machine parts. In addition to these functional and organic forms, digital structures are inserted as CNC cut plaster castings and plasma cut steel fragments. The origin of these digital objects are extractions of glitches from ruined digital videos and images. Embodied as physical glitches, these forms assimilate and blend with the other forms in similar ways to the organic structures. All these forms, mechanical, architectural, organic, and digital are hybridized underneath thick layers of acrylic bonded cement. The resulting structures exude a heavy and aged presence. Thick applications of cement homogenize the forms into seamless systems, with surfaces appearing like eroded stone. Layered over the cement surfaces, projection mapped animations move across the forms. Projections of
glitching video, often referencing the subject matter and composition of the sculptures interact with the interconnected systems, confusing the tangibility of the works.

I refer to these works as *Re-encodings* for two reasons. Firstly, the digital content of the sculptures heavily utilizes the process of re-encoding as it relates to digital media. The term re-encoding is used in digital media to describe a translation of content into a different format. This process often leads to a decline in the quality of the digital content and sometimes produces what are known as artifacts, visual defects in video and images. The projected animations in addition to the physical sculptural elements produced through digital manufacturing are already definitively re-encodings. I also refer to this term because of a metaphorical parallel between its definition and the nature of ruins. Ruins are a process of encoding material and agency into a fragmentary form. In the context of a ruin, the intentions of the humans who constructed them and the properties of the materials used to build them are eroded and woven into nature. The resulting forms transmit these forces through the format of a ruin. This body of sculptures encodes the physical materials and their agential memory into ruins. The digital projections, which themselves are re-encodings, function as a re-encoding of the physical ruin as well. The mapping of the surface in addition to the mimesis of physical form within the animation conveys another level of encoding of the content, thus presenting a re-encoding. Though these works use projections to create the illusion of digital content emanating from their surfaces, they are not meant to entirely fool the eye. My intention is rather to instill in the viewer a heightened awareness of how the inherent agency of digital entities can
influence our perception of form, material and space. Of the three works considered, *Conduit* is the most grandiose and situated at the center of the exhibit space.

*Conduit* features thick winding vines assimilating into an elongated form that implies an architectural or mechanical function. This large-scale work is approximately 15 feet long, horizontally situated and skewed slightly upwards as it is held several feet off the ground with a heavy steel frame. A series of projections illuminate the concrete surface and animate conglomerates of foam shapes and deconstructed machines. This merged system begins to mimic the directionality of the vines, the primary influence for the composition. At various points, the mechanical structure is hollowed, revealing internal functions and connections between unlike forms and materials. For example, one of these hollow sections features wisteria vines morphing into thick geometric extrusions, splitting at random points and dissolving into the geometry of the foam packaging. I’m implying an adaptability within these systems as the materials transmute and flow through each other. This is inspired by the experimental nature of ruins, the results of organic matter and human constructions weaving together. *Conduit* renders this as a type of delivery system, or network. At either end of the structure, hollowed chambers overflow with vines and machinery as if this was a component removed from a larger system. The petrified concrete surface varies from a smoother stone-like surface to rough and messy aggregates around areas of increased destruction. Projections illuminate and animate the surfaces, implying a transfer of energy or information through the interwoven forms. For the content of the animations, I’m using the systems referenced in the work to experiment with overlapping their functionalities. For example, if I’m moving visual data
through a vine, does the visual data split when the vine splits, or does it multiply? How do pixels bridge a weak connection between forms? Various forms process the light at different speeds across the structure. At random moments, the projections glitch superimposed video of the sculpture itself, suggesting an instability of the object itself. In these moments, the physical reality and digital reality of the sculpture is confused and difficult to discern. *Conduit* is a large-scale experimentation of the transfer of these projected flows, and how they integrate, succeed, and fail in a system of ruin.

*Inosculation* is a branching network of light, roots and steel, merging in form as it ascends into a single massive root. The term inosculation is used in botany to describe the merging of trees, roots, and branches. This sculpture is concerned with extending that definition to other forms and systems. A projection of ruined video streams across the form, mimicking the lines and textures of the sculpture as it flows across the network.

The work is suspended in an eight-foot-tall rectangular steel frame, with offshoots of the sculpture connecting to the frame at various points. Compositionally, it is limited to the interior of the frame, disconnecting it from outside space while also providing necessary suspension for the fragile system. Mainly concentrated in areas approaching the steel frame, the roots morph into orthogonal networks of lines and patterns. Near the top of the structure, the heavier volume of roots is blended into a geometric mass. Thick square extrusions of orthogonal lines descend from machine-like forms, blending into, or sometimes growing around other extensions of roots. The cement surfaces indicate a small glimmer of organic life with patches of emerging green moss on an otherwise decaying structure. The ruin is activated by a digital life through its projections, which
are mapped across certain paths and forms. The projection mimics the stains of the surface, but flows upwards, as if the roots are delivering the content of the projection like water. In brief intervals, the projections reveal recognizable forms, textures of bark and microorganisms flash through the glitch, a memory of its original form still alive in its re-encoding. *Inosculuation* is focused primarily on the root and its integration to other forms as the main influence of content in the projections.

*Datafall* features a cascade of animated light moving down a series of decaying geometric surfaces, mimicking a waterfall. These features are suspended by a steel structure that supports the ruin as it descends in a vertical orientation. *Datafall* is an experimentation of weight and gravity as a force acting upon digital media. The projections flow with gravity and the surface features of the forms, but occasionally glitch from the pull of gravity, reminding the viewer of its ephemerality. *Datafall* demonstrates that a digital entity can feel like something real when contextually paired to a recognizable force, like that of gravity. The state of the ruin shows that the projection deviates from the rule of gravity, which it is attempting to simulate. *Datafall* is positioned across from *Inosculuation* on the other side of a through passage to the rest of the exhibit. These two works frame this continuation of the exhibit space and stand with an identical gallery footprint. The two works demonstrate a contrasting relationship, with the projection mapped animations of *Datafall* trailing downward like the flow of a waterfall and the illuminated paths of *Inosculuation* flowing upward with the roots. Though identical in footprint, the steel framework of *Datafall* breaks the geometry of the frame to support its forms while *Inosculuation* maintains a rectangular frame.
The content of these *Re-encodings* is heavily informed by inherent properties and baggage of the materials used to construct them. A full understanding of their position as a ruin requires a deeper investigation of the concrete, foam, vines, and glitch that dominate their form.

Concrete is a material that provides a literal foundation for humanity. It is a material of strength and permanence that lingers as a feature of modern ruins. This *Re-encodings* series was informed by a previous body of work that was heavily influenced by Brutalist architecture and monuments, many of which belonged to the fallen Soviet Union. These structures resemble the megalithic essence of ancient ruins and embrace the destructive process as a feature of their aesthetic. I find Brutalist works that are abandoned to be at the height of their artistic beauty. It is through these works that concrete also exists as a material of ruin, specifically ruins of the recent past and present. Though my introduction to using concrete in my work was through an appreciation of Brutalist ruins, *Re-encodings* also leverage the material for its dynamic use and environmental implications. When I began creating work at the scale of the *Re-encodings*, it became both too difficult and heavy to cast concrete structures. Through experimentation, I found a blend of acrylic and cement that was capable of a spray application, allowing giant forms to be surfaced quickly and efficiently. The process in its finality closely resembles a cast object and a feeling of petrification or fossilization remains apparent. A similar appearance to the petrified forms of Pompeii are transmitted through the aggregation of cement layers. Pompeii exudes a similar ominous quality to *Re-encodings*; in the context of a ruin, the material is like a harbinger of destruction. It is
if a catastrophic event froze these systems in concrete, with digital remains attempting to continue. Concrete can be the ash of Pompeii if we view these sculptures in the context of our current time. This thought of concrete petrification covering our future evokes a similar passage from Morton’s *Hyperobjects* in which he refers to three great timescales: the horrifying, the terrifying, and the petrifying. These eras refer to Morton’s hypotheses of our planet’s future given the insufficient effort to combat various ecological disasters. Morton’s era of petrification refers to the fossils of humanity, consisting of concrete, graphene bricks, and all imaginable states of conglomerated plastics and ceramics. My use of concrete, various other materials like Styrofoam and the positioning of these materials as a component of a ruin allude to a similar narrative. The looming destruction of climate change holds concrete partially responsible for intense carbon emissions. Cement is produced at a pound for pound atmospheric carbon exchange rate. I find that this even exchange rate conveniently endows the tangible material of cement with the ability to quantifiable represent the intangible force of climate catastrophe. My sculptures encode these aspects of cement through the format of a ruin.

The use of foam in my sculpture is attributed to its formal inheritance of detritus. I see foam as a mirror of our society. The shapes of our commodities, obsession with consumerism, and attitude towards the environment are carried as material baggage through foam. The forms of every mass manufactured object we use is literally imprinted

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11 (Morton, “Hyperobjects,” 59)
12 (Morton, “Hyperobjects,” 60)
in the geometry of the foam. I use these forms to create the abstracted mechanical looking jargon that the combination of foam renders. It doesn't resemble anything recognizably useful yet appears functional and intentional. I find this to be metaphorically parallel with the actual function of the things that the foam once housed. Our consumer driven society rests on the mass production and consumption of frivolous things, marketed to be necessary. It is only natural that these forms are building blocks of the New Ruins. In regard to foam’s material properties, it's an exceptionally versatile sculpture material. It is somewhat strong, yet easy to carve and machine. It is exceptionally lightweight which is essential for the scale of my work. Foam is easily sourced, as it is often present in recycling centers. These great sculptural properties are also its downfall, however. The ecological implications of foam are massive. It takes hundreds of years to break down, it accounts for a massive portion of the planet’s trash, and it's often used as a single use material. My work utilizes foam for its ability as pliable sculpture material, its environmentally charged presence, and the inheritance of a tangible form that directly reflects our consumerist habits.

Vines are material with an existing foothold in depictions of ruins. They invade and spread across forms with a vitality that most powerfully demonstrates an agency of organic forms. I use both vines and roots interchangeably to depict this in my sculptures. Vines are a material that have the visual flexibility to integrate into other forms, like wires and pipes. When utilized in the right composition, vines can also disrupt the visual organization of machinery. The form of these structures carries the agency of the organic system, they are real vines that grew into their shape. The decision making of that growth
is now a system that is combined with mechanical systems and digital systems within the
Re-encodings. This material is something often designated as waste, like foam. The
power of their spread makes them into a nuisance for the organization of infrastructure.
My work utilizes the vitality and complexity of the vine, inherent in its agency, as a
recognizable form to pair with digital systems. Through doing so, the complicated
interconnectedness of digital systems, abstracted and illustrated through projection, have
a physical system through which they can be viewed. In a sense, vines operate as both a
visual signifier of ruin and a metaphorical medium that aids in the visual delivery of
digital agency to the viewer.

The use of an organic system amongst a backdrop of inorganic and heavily
mechanized systems is reminiscent of artist Mark Dion’s Neukom Vivarium. Featuring a
massive fallen hemlock tree in a type of life-support greenhouse, Dion’s work situates the
complexity of a vast organic ecosystem in the hands of technology. Removed from the
context of nature, the dead tree relies on a technologically complex combination of air,
water, humidity, and soil enhancement to sustain a complex ecosystem. I find Dion’s
experiment similar to the experimental exchange of systems that are present in ruins,
where nature and residual human efforts interact. While Neukom Vivarium highlights the
complexity of nature and perhaps the hubris of humankind, Re-encodings place digital
systems center stage. Dion’s work additionally addresses life in an interesting capacity,
with the dead tree fueling a complex ecosystem. The petrified structures of Re-encodings
offer a similar structure for the “life” of digital content as projection mapped pixels
navigate the seemingly dead form. In reference to the purpose of Neukom Vivarium,
Dion states “It is a memento mori – an appreciation of decay as a process and as a tool for discourse.”\textsuperscript{13} I use ruins to this same end. Primarily, my use of them is based off an appreciation for their decay but I also use ruin as a tool to critique the present, a concept expanded upon in the previous chapter as it relates to science fiction.

Existing as an interwoven component of ruins with the aforementioned physical materials, the digital media of \textit{Re-encodings} incite the appearance of the agency of digital forms and systems. These sculptures use digital forms as both tangible, fabricated structures, and intangible, projected structures to destabilize our differentiation of physical and digital space.

The physical glitches present in the \textit{Re-encodings} are plaster and cement castings of CNC routed molds and CNC Plasma cut steel. Their form is created by extracting line drawings from ruined video. I produce these by ruining random video data by forcibly encoding and decoding it with misplaced, corrupt, or missing information. Digital video formats are dependent on these encoding systems to greatly reduce the size of data needed to both store and playback video in real time. This process of glitching imagery occurs naturally in digital network and satellite video feeds as data is either throttled or interfered with on its route to a device. The resulting imagery consists of misplaced pixels, smears and trails of color and form. For example, anomalies can occur where certain colors of a scene will become transparent, revealing a different point of time in the video playing through it. I extract interesting moments in anomalous instances and save them as still images, where I can then run an edge-detect function; a graphical tool

\textsuperscript{13} (Dion n.d.)
that comes standard with most photo manipulation programs. Through this function I can extract a line drawing of these scenes and change it to a format that is usable for CNC operations. The cement and plaster glitches are routed with a heavy V-taper bit into foam molds that when cast, form square shaped extrusions that easily merge with the geometric faces of foam packaging and machinery and the ends of vines and roots. These structures, with what often appear to be cryptic forms and repeating shapes, resemble ancient Mayan reliefs. The steel components that use this same process are fabricated with a CNC plasma torch, which cuts the extracted lines from heavy steel plates. Most heavily implemented at the bottom of *Inosculation*, these forms can bend and morph to adapt to the organic shapes of the vines and roots. Their strength and ability to weld to the frames also provides the stabilization to suspend forms at precarious orientations.

Both of these digitally formed structures are implemented to cross the physical, digital threshold. They are camouflaged as physical objects that integrate with and mimic the vines, foam packaging, and mechanical detritus they are merged with. Though I force this interaction through the fabrication of these digital objects and the construction of these sculptural ruins, I’m demonstrating a similarity that already exists between these systems. I’m alluding to the fact that digital systems are already disguised and merged with spaces that we do not deem digital. What we might believe to be organic is in fact digitally augmented, as implied through the grafting of a vine to a glitch. The agency of a digital entity isn’t limited to a screen or a network; it has been and will continue to be a feature of physical things, both organic and inorganic. This point is further exhibited through the projections of digital content.
The animated pixels and digital imagery that projects across Re-encodings originate from the same sources as the physical glitches. However, the video data in the projections also splice content that relates to specific works. For example, Conduit features fractured video showing the transfer of power and information in various forms. Inosculation projects the texture of bark morphing into a grid. Datafall merges flowing water with automotive traffic. This imagery is barely and briefly discernable as a means to only hint at connections to specific content. Discerning digital agency is a question of how, not what. The projections are kept ruined and abstract so that the mind of the viewer is primarily concerned with how the content is interacting rather than what is being represented. By witnessing the projected content on an irregular, projection mapped surface, I’m alluding to how digital content has transcended the screen. It becomes unclear if the sculpture is being projected with light or if its surface itself is emanating the light. In a metaphorical sense, I am showing the viewer that digital content has the power to obscure its source and tangibility, and I am challenging them to think of it as something that occupies form and space in a physical sense.

My digital projections are inspired by the work Rafik Anadol, whose data sculptures and installations question the threshold of physical and digital space. Anadol’s work also utilizes complex artificial intelligences to react to parameterized inputs in real time implicating both the installation space and viewer. Anadol represents the cutting edge of both projection mapping and data visualization in contemporary art. Re-Encoding’s projection maps are inspired by his work which originally demonstrated to me the extent to which the technology could be leveraged. In addition, Anadol’s work
convinces me of the rich materiality that is imbedded in data. In reference to the Digital Agency chapter, data is dimensionally obscure and difficult to visualize. Digital systems can be leveraged to use data as a highly potent artistic medium, which Anadol demonstrates through the visually enthralling quality of his data sculptures. My own use of leveraging data to algorithmically produce works is explored in the following chapter of *Generative Ruins*. 
CHAPTER FIVE
GENERATIVE RUINS

Generative Ruins (Fig. 4 – 19) are a set of algorithms, embodied as sixteen sculptural 3D prints deposited in faux copper PLA. This series experiments with the paradoxical nature of rationalizing ruins; a process that is entropic and irrational in essence. The forms are digitally grown from a pair of algorithms to produce vines and roots entangling eroding architectural forms in dramatic compositions. To influence new forms and relationships within the system, I manipulate a variety of user inputs and scalable parameters. By parameterizing the visual aspects of ruins, this combination of systems leverages the computer’s ability to infinitely randomize outcomes and generate unique ruins.

The process of fabricating ruins echoes an art historical trend rooted in Romantic era paintings. Ruins were imagined and inserted into compositions as devices of nostalgia that instilled grandeur of the past. Additionally, they were utilized as allegorical symbols of impermanence and humility to the effects of time. Generative Ruins reconfigures the process of imagining ruins in a digital era with characteristics of computing and digital manufacturing inherent in the process of both designing and creating the form.

As mentioned in the Framing Ruins chapter, Romantic era artists rendered ruins, exaggerated ruins, and invented their own ruins. Artists sought to capture the remains of grand civilizations and convey the drama of these sublime spaces. This often-meant exaggerating what was observed. Mid-18th Century printmaker Giovanni Batista Piranesi did just that in his detailed etchings. His works consists of observable Roman structures,
sometimes layered in false perspectives to compress the surrounding periphery of ruins into a dense composition. Some of Piranesi’s works are outright fantasy, imagined ruins stacked in impossible configurations. The grandeur of his works is a testament to his lust for ruins. The magnificence of Piranesi’s imagined ruins comes from his intensive architectural investigations of Rome of which he conceived four architectural volumes. His mastery of depicting ruins instilled in him an ability to generate ruins more impressive than one could hope to find; visitors of Rome’s ruins were known to be disenchanted by the false realism of his depictions14.

I’m inspired by both Piranesi’s formulaic expertise in producing ruins and stylistic approach to rendering them. The algorithms that Generative Ruins utilize are designed to achieve an approach like Piranesi; by carefully studying and deploying the content that instills in us the mystique and wonder of ruins, a computer can be used to creatively produce them. The content of Piranesi’s ruins often depicts architectural forms in heavily decayed states. Broken and fragmented to borderline unrecognizable structures, the orthogonal lines of the architecture disintegrate into the organic vegetation. Generative Ruins seeks a similar representation through two separate scripts, Disintegrator (Fig. 20) and Rhizomaker (Fig. 21). The first, produces a collection of geometric forms that are recursively eroded and faceted to resemble ruined architecture. The second script uses this eroded form and other inputs as a scaffold for growing vining structures. The rhizomatic sprawl of the vines can climb, connect and support the eroded architecture of Disintegrator.

14 Hill, “Architecture of Ruins,” 90
Disintegrator begins with generating a random assortment of extruded rectangular forms based on parameters that dictate scale and complexity. The resulting forms resemble non-descript architectural fragments, sometimes split into multiple pieces at strange orientations, most notably characterized in the works GR_3 (Fig. 7), GR_5 (Fig. 9), and GR_A (Fig. 14). Disintegrator then maps vertically oriented paths across the forms to simulate the effects of heavy erosion. The program has the option to recursively simulate this effect, allowing for the erosion to compound into heavy crevices and cracks through the form. After this simulation of physical erosion, the algorithm applies a type of digital erosion by reducing the complexity of geometry. This involves rebuilding the object with a much smaller number of mesh-defining faces, resulting in a faceted, grooved surface. The resulting geometry has the appearance of heavily decayed architecture, but with a geometric quality that grounds it as a digital model.

The second program in this process is Rhizomaker, which grows vining structures over the eroded forms of Disintegrator. This process begins by plugging a form into the algorithm and specifying parameters relating to the complexity and thickness of the vines. Rhizomaker gives the option to grow vines from either random points in space, or on the surfaces of the form, or from the ground up resembling roots. By running the program recursively, the vines can grow new vines across the architecture or even themselves, resulting in a more naturalistic depiction of growth. The works in this series run this algorithm one to three times. GR_0 (Fig. 4) demonstrates a single pass of Rhizomaker, resulting in vines that merge but do not grow over top of each other. GR_B
(Fig. 15) demonstrates a triple pass of the algorithm, demonstrating both an increased number of overall vines and multiple courses of new growth overlapping itself.

This series evokes a conversation on the role of the computer in art making, and ultimately a reflection of digital agency. At what point does the system become the artist? What is the role of the creator of the system? Are these algorithms a tool, or the artist, or the artwork itself? *Generative Ruins* are my pursuit to question this dynamic. Originally, I thought of the programs as the artist, the generated content the art, and I the editor. After extensive work on the *Re-encodings* series, I found myself exhausted of trying to imagine new forms in ruins, the very thing *Generative Ruins* is programmed to do endlessly, instantly, and autonomously. I realized through my own effort of imagining ruins that this is the real power of this system. My role as editor exists because there is no reasonable limit to how many times the system can “rethink” a form. I believe my role in this process is the artist, and the algorithms themselves, the art. Therefore, I present *Generative Ruins* as a set of sixteen 3d prints, and also as a pair of Algorithms, *Disintegrator* and *Rhizomaker*, because through them, there is an infinite number of works. This dynamic alludes to the role and power of digital agency. *Generative Ruins* reflect my own agency as it applies to designing the parameters that the algorithm can function within. There are very conscious decisions on my part that shape the appearance of these generated forms. This system has the power to both hold those decisions and use them as an extension of my agency. Additionally, this system can execute this, faster, more creatively, and infinitely. Digital agency has the power to be viewed as creative, beyond being just a conduit of human agency.
In terms of scale, these works are individually dwarfed by the Re-encodings. However, they have a strong presence within the gallery due to their quantity and enclosure. These 16 works are oriented in a 4 x 4 grid with walls encompassing the perimeter. A path for the viewer opens across the center aisle of the rows of sculptures. The spacing of the matrix allows the viewer to move amongst the steel and glass frames that present the ruins. The walls surrounding these works shifts the scale of the gallery to a more intimate setting. The great fluctuation in scale between generative ruins and the re-encodings is like the transformation of scale from physical to digital media. By walking into this space amongst these works, the viewers sense of scale is shifted and obscured; this is in direct connection with the obscurity of scale in digital forms mentioned in the chapter on digital agency.

The number of works chosen for this series demonstrates a facet of the power in digital forms in the ability to originally create new works without exhaustion. The exact number 16 is chosen however for its direct connection to computing, specifically in hexadecimal notation. Hexadecimal is a base-16 number system used in computing applications that utilizes numbers 0 – 9 and letters A – F to represent 16 total values. The significance of this system to Generative Ruins is in relation to a deeper question about the materiality of digital forms. In a sense these pieces are constructed of both plastic filament and data. Data at its deepest level is represented in binary code as 0’s and 1’s. Hexadecimal’s role in computing is to offer a shorthand notation for representing binaries.
specifically for humans to read. Historically, it is the human translation of the machine’s language. Both the quantity of work and the corresponding names of the individual pieces are an in regard to the hexadecimal system. The names of these sculptures designate GR for Generative Ruins and a corresponding value of 0-9 or A-F.

Regarding material, the printed forms of Generative Ruins investigate copper and plastic as they relate to computing and artificiality. Though printed as plastic, these sculptures appear convincingly metallic. Though copper is still celebrated as beautiful artistic medium, it is notably more important for its role in networking and delivering electricity due to its inherent conductivity. There now exists an unbroken network of copper, from power plants and networking centers, through computers and all their parts, to the tips of our fingers on a keyboard. Printing filaments come in a vast array of colors and metallic finishes; I chose copper because it is the substance that makes Generative Ruins possible. In a sense, they are rendered with respect to the guts of their creator. Copper is what lies at the material core of the agency of the algorithms and functions like a genetic trait passed to its creation. This is only illusionary however, the copper is a foil, only being copper in appearance. Its luster draws us in, its connection to computing is intimate, yet the work remains plastic. Plastic is socially associated with fakeness for its widespread use in cheap objects and ability to fool, in sharp contrast to the semi-precious and inherent value of copper. In the end, these ruins are fake as well. The conditions that create them are artificial, the agency through which they are mediated is artificial, and the

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15 Wikipedia contributors, "Hexadecimal"
beautiful material of which they are made is artificial. Artificiality is a major component of what makes digital agency both powerful and difficult to discern. Via the internet, we interact with artificial people, we are fed fake news, and we propagate fake impressions of who people are through social media.

The copper plastic dynamic of *Generative Ruins* also invites further speculation of the romantic era tradition of creating ruins, specifically in how it relates to authenticity and nostalgia. The works of artists like Piranesi, which constitute a major aesthetic influence for this body of work, represents a grand embellishment of ruins and outright fabrication of non-existent architectural ruins. Romantic ruins fabricated authenticity and history to the societies that produced them. Romantic ruins are a paradox; they are only as authentic as the imagined and embellished past wrought from an absence. This is the case for Piranesi and Giovanni Paulo Panini in Rome while Casper David Friedrich’s ruins became an emblem of German nationalism and identity. The loss of the whole and fragmentary nature of ruins invites creative speculation and exaggeration. Additionally, the exaggeration of ruins is an attempt to convey the mystique and dramatic mood that one feels amidst them. This embellishment is what forges a deep nostalgia. The nostalgic vision is the copper of *Generative Ruins* and the plastic, the false reality. Romantic ruins are themselves *Generative Ruins* that contend with artificiality. Despite how the paradox of romantic ruins may undermine historical foundations of identity, I still celebrate them as powerful creations. The viewer of *Generative Ruins* can choose whether they see the sculptures as copper or plastic.
CHAPTER SIX

CONCLUSION

Through the integration of physical, natural, and digital forms and materials, New Ruins grants the viewer a perspective of digital agency. Through creating future ruins, I am suggesting a sense of concern for the status quo regarding our inability to contend with the implications of digital agency. Additionally, I use ruin as a method of decontextualization to overwrite the viewers existing contextual response to physical and digital materials so that they may be perceived as matter that implicate our future. In constructing this perspective of future ruins, I utilize an archeologically inspired format of display to posit these ruins as a historically significant exhibit.

My work experimentally combines physical and digital components in large scale assemblages *Conduit, Datafall, and Inosculation*. These *Re-encodings* instill in the viewer a heightened awareness of how the inherent agency of digital entities can influence our perception of form, material and space. In the series *Generative Ruins*, I parameterize the visual aspects of ruins to leverage the computer’s ability to creatively generate new content. This series evokes a conversation on the role of the computer in art making, and ultimately a reflection of digital agency. In constructing a perspective of digital agency through ruins, I use aesthetic influences of from a variety of sources as a familiar insertion point to reading the work. Romantic capriccios, modern Soviet Brutalist ruins and depictions of future ruins from contemporary science fiction. My research into the construction and perspective of digital agency is informed by theorists Jane Bennett, Timothy Morton and Gilles Deleuze. Additionally, artists Peter
Buggenhout, Anselm Kiefer, Mark Dion, Rafīk Anadol, and Giovanni Batista Piranesi have inspired my creative process.

My reason for pursuing this body of work is to construct fascinating sculptures that acknowledge digital agency in digital forms and systems. I believe this underlying power to be a significant mediator between the way we perceive nature, material, and space. It is my intention via this series to instill within the viewer a more thoughtful consideration of how physical and digital space, materials, and systems are increasingly overlapping so that we may better orient ourselves moving forward.
Figure 1: *Conduit*

Acrylic bonded cement, expanded polystyrene, extruded polystyrene, inkjet printer components, desktop computer components, wisteria vines, grape vines, plasma cut steel, plaster, steel tubing, projector. (168” x 60” x 55”), 2020
Figure 2: *Inosculatation*

Acrylic bonded cement, oak root, expanded polystyrene, plasma cut steel, plaster, steel tubing, projector, video (36” x 36” x 96”), 2020
Figure 3: *Datafall*

Acrylic bonded cement, inkjet printer components, desktop computer components, expanded polystyrene, wisteria vines, plaster, steel tubing, projector, video. (36” x 36” x 96”), 2020
Figure 4: *GR_0*

3D Print, copper PVA filament, (2 ½” x 2 ½” x 10 ½”), 2020
Figure 5: *GR_1*

3D Print, copper PVA filament, (3” x 2 ½” x 10 ½”), 2020
Figure 6: GR_2

3D Print, copper PVA filament, (3 ½” x 3 ½” x 9”), 2020
Figure 7: GR_3

3D Print, copper PVA filament, (9” x 3” x 8”), 2020
Figure 8: *GR_4*

3D Print, copper PVA filament, (8” x 4 ½” x 8”), 2020
Figure 9: *GR_5*

3D Print, copper PVA filament, (4 ½” x 3” x 7 ½”), 2020
Figure 10: \textit{GR\_6}

3D Print, copper PVA filament, (3” x 3” x 11”), 2020
Figure 11: GR_7

3D Print, copper PVA filament, (4 ½” x 4” x 10”), 2020
Figure 12: *GR_8*

3D Print, copper PVA filament, (4 ½” x 2 ½” x 7”), 2020
Figure 13: GR_9

3D Print, copper PVA filament, (5 ½” x 5 ½” x 10 ½”), 2020
Figure 14: GR_A

3D Print, copper PVA filament, (7” x 4” x 8”), 2020
Figure 15: \textit{GR\_B}

3D Print, copper PVA filament, \((7'' \times 4\frac{1}{2}'' \times 7\frac{1}{2}'')\), 2020
Figure 16: *GR_C*

3D Print, copper PVA filament, (9 ½” x 4 ½” x 9 ½”), 2020
Figure 17: \textit{GR\_D}

3D Print, copper PVA filament, (3 $\frac{1}{2}$” x 3” x 10 $\frac{1}{2}$”), 2020
Figure 18: *GR_E*

3D Print, copper PVA filament, (3” x 3” x 11”), 2020
Figure 19: GR_F

3D Print, copper PVA filament, (7” x 3 ½” x 10 ½”), 2020
Figure 20: *Disintegrator Algorithm*

Grasshopper Rhino Script, 2020

Figure 21: *Rhizomaker Algorithm*

Grasshopper Rhino Script, 2020
INSTALLATION VIEWS
REFERENCES


