

INTERCHANGEABLE SCALE OF ART AND ARCHITECTURE:

THE FRAME OF HANS VREDEMAN DE VRIES

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Figure 0. Hans Vredeman de Vries Perspective 1604-05

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ABSTRACT

Since the beginning of humanity, art and architecture have had an inseparable relationship. They have always been interrelated subjects connected through many domains. This dissertation, however, aims to explore more profound than the surface that creates this interconnectivity. It focuses on turning this surface into a frame through which art and architecture can communicate, change their scales. That is to say, it engages itself with *the Interchangeable Scale of Art and Architecture*.

The scale between these two disciplines shifted from time to time; architecture got shrunk into paintings, and the paintings got shrunk into architecture. The tension between the two worlds offered many possibilities and opened doors to discoveries. Dutch painter, architect, engineer, town planner, draughtsman, glass painter *Hans Vredeman de Vries(1526-1609)* mastered one of these discoveries, *perspective*, and invented his imaginary worlds with his pen and paper. He was a unique figure who contained many scales of and between art and architecture.

By visiting antiquity and going through the frame of artworks, this paper investigates this playful dynamism between art and architecture in the world of Hans Vredeman de Vries.

INTRODUCTION

Since the beginning of humanity, art and architecture have had an inseparable relationship. Humankind needed shelter and enclosed the space around them, where architecture sparkled. Once they were safe in the shelter they created, the urge to display their artistic potential appeared; they applied the initial steps of art on their first canvas, which was the shelter itself. Architecture was the toil of art, which shrunk into the frame of art in the following centuries. This mutual relationship gave art the power of constructing architecture, where the frame of the art represented real-life size architecture. In time, these two concepts intertwined and interdependent. This interchangeability resulted in stylistic, spatial, and technical discoveries in both fields. Perspective was one of the influential discoveries that justified this connection between the two coinciding themes. It is a concept that has built a bridge between two and three-dimensional worlds throughout the centuries. Perspective needs objects whose geometry could be converted onto a flat surface reflecting its depth. The architecture contains series of objects which can create a narrative. As a result, they became a subject to practice perspective, which could fit the architecture into a frame in the most realistic way.

With the efflorescence of Renaissance architecture in the 16th century Netherlands, linear perspective became prominent among the artists. Architecture becoming an object, and eventually, a subject, for the perspective drawings led to another discovery. This was a new art genre in the Low Countries: architectural painting. In that era, when the scale of architecture started to be experienced by the drawings, engravings, and prints, a crucial name appeared who shaped the Dutch architecture with two-dimensional media: Hans Vredeman de Vries(1526-1609). He was a Dutch painter, architect, engineer, town planner, draughtsman, glass painter, a figure containing many scales, one of whose expertise was the architectural painting. In the 16thand 17th centuries, Vredeman became a pioneer in the exemplification of this scale change in the Netherlands by conducting a series of experiments. These were the representations of his imaginary architecture in the form of painting, prints, engravings in which he often played with the concept of spatial design on a canvas. In the light of Vitruvius and Sebastiano Serlio, he produced his three-dimensional architecture on a flat surface with the help of a geometrical technique called linear perspective, which he first used in the Netherlands.

His productions were more than just an artwork that aimed to glorify the space in which they were placed but rather an architectural manifesto. The printing industry made him well aware of how Renaissance was developing in Italy at that time. His paintings became a manifestation and introduction of Renaissance architecture in his country concerning locality. Although none of his designs could be built, the impact of his artworks' on architecture and his architecture on his art reflects the interchangeability between them. Vredeman becomes a perfect case study to interrogate this scale phenomenon, as everything that can be observed is presented in a frame, which invites the viewer to walk through the third dimension.

This thesis investigates the richness and possibilities that this interchangeability creates within the scope of art and architecture of Hans Vredeman de Vries. The paper reverses the frame of research twice to answer the following questions: In this intertwinement, does art become a tool to convey architecture when stuck in a canvas? Is architecture (Vredeman's architecture) a form of art, an image, when scaled to 1:1?

The research starts with a deductive method. The main topic of the interchangeable scale of art and architecture demands an overarching concept that establishes the mutual connection between the two main branches of the title. The perspective is highlighted since it is a vital agent between two and three-dimensional worlds. The investigation of perspective opens doors to a new ground that merges the leading actors of the research question. Architectural painting, at this stage, is ascribed a great significance to interrogate the built environment in the frame of artistic production. Once the concept of architectural painting comes into the picture, and as this genre requires the use of linear perspective to exist, the debut of Hans Vredeman de Vries in the research process is immediate and inevitable.

The literature analysis, which has started to be conducted simultaneously with the concept and case study definition, becomes deepened once the key topics are determined. Profound scrutiny of existing books, articles, research papers, prints, engravings, drawings, and paintings has been completed. There are many sources written about the rich and multidisciplinary career of Hans Vredeman de Vries, where several art historians examined his works in various scopes and from different perspectives. One of them, Christopher Heuer, brings the findings of his comprehensive research and documentation together in The City Rehearsed: Object, Architecture, and Print in the Worlds of Hans Vredeman de Vries. As the name also suggests that the city is rehearsed through images by collecting Vredeman's various domains; this is used as an essential book to understand the whole picture. The other sources, like Hans Vredeman de Vries and the Artes Mechanicae Revisited and Tussen Stadspaleizen en Luchtkastelen: Hans Vredeman de Vries en de Renaissance, on the other hand, accommodate a compilation of different articles and research papers that enrich the research further in virtue of individuality of papers. The diversity of languages and different methods used to present the research accumulated so far has built the required knowledge up and, at the same time, enables to deconstruct it when necessary, which makes the research method inductive as much as deductive. Concurrently, the teachings and theories of Vitruvius and Serlio have also been examined to understand the core of Vredeman's logic. The sources already acknowledge a strong relationship between his art and architecture; however, they do not address how his process established the connection. After apprehending and embracing Vredeman's whole and pieces, his media will deeply be investigated.

The structure of this thesis consists of three chapters. Given the methodology, the first chapter will provide an understanding and theory of perspective, one of the keystones that made it possible to scale architecture from 1:1 into the frame. In other words, it will create a transition between art and architecture by elaborating on perspective in the scope of Vitruvius and Serlio and by weaving the path towards Hans Vredeman de Vries. The second chapter will focus on the former part of the thesis question: the architectural information his images impart. With chronological architectural analysis of his engravings and paintings, the traces to understand his logic behind his imaginative architecture will be captured. By that, if and how, his images reflect an architectural approach, and a message will be answered. The third chapter will move the reader to the reverse side of the research question and investigate if Vredeman's architecture pursues building an image. In the end, the conclusion will finalize the answers to the research question.

TINESTICATION INTO 3D

In the first half of the 15th century, extraordinary and interactive experimentation took place in Florence, Italy. The Florentines were expected to look at the Florence Baptistery through a hole that was drilled onto the painting of the baptistery. After participating in the experiment, they must have been left speechless and unaware that it was proof of an outstanding new concept, a concept that can break new ground in the large spectrum of the fields: such as art, architecture, geometry, technology. It is called perspective.

Filippo Brunelleschi(1377-1446) was the architect of this setting; therefore, he is regarded as the inventor of linear perspective. The term was not used for the first time; people had already been familiar with it as "perspectiva," meaning the science of optics.¹ However, what they meant with perspective in the 15th century was not the game of light but an artistic action. Eventually, they needed to differentiate these two concepts by calling the science of optics "perspectiva naturalis" and the latter as "perspectiva artificialis."² Brunelleschi, on the other hand, with his setting of a mirror and his painting, created a platform that merges these two concepts instead of distinguishing them. Despite being defined as divergent branches, there was also one point they intersected. A mirror is an optical tool that makes it possible to scale the real-life view into a hand-sized object. The painting, which is based on the use of the linear perspective to provide the alignment with the mirrored view, also reveals the ability to fit the architecture into the frame of art. In the creation of his overlapping, Brunelleschi was aware that perspective was "a felicitous marriage of art and science"³, which was ahead of his time.

The first formal example of a perspective painting, the baptistery painting, which was not preserved until today, was recorded by transforming an architectural object into an art object. Perspective is a groundbreaking discovery that plays a massive role in creating this tension between art and architecture. It shrinks a three-dimensional object on a two-dimensional surface in the hope of capturing the depth with the help of geometry. It invites the observes to follow the lines, to get into the frame, and wander around. It creates the hyperrealism of architecture.

Although Brunelleschi receives praise for the discovery of perspective, it was not an immediate action performed by him. Perspective had been practiced, yet not explicitly documented, until Leone Battista Alberti(1404-1472) took the initiative. Nevertheless, some indications proved that it had already been exercised even in ancient times. Roman wall paintings, for example, show an apprehensible tendency towards the use of perspective. There was especially one name that has had a huge impact not only on the Roman wall paintings but also on the whole world of art and architecture. Marcus Vitruvius Pollio(c.80 BC - c.20BC) was a multidisciplinary figure who set the foundation of the idea of perspective in BCE. In his book De Architectura Libri Decem(The Ten Books on Architecture), which has a significant effect on the architectural development in the following centuries, especially Renaissance architecture, he does not conspicuously reveal the concept of perspective. Nonetheless, he introduces the term *scenographie*, which could be perceived as a sign of perspective.

Scenographie appears as a third additional way of drawing, coming after ichonographia and orthographia. First, he clarifies two-dimensional elements, ichonographia as the ground floor plan and orthographia standing for the elevation. Then he describes the scenographie as the drawing of the "front façade with the sides withdrawing into the background, the lines all meeting in the center of a circle"⁴, that is to say, merging the former two by introducing depth with the recognition of a central point. He highlights scenographie as a complementary architectural concept. If the word is analyzed, it also stands for a *painting of the stage* or instead *scene painting* ⁵, which refers to the theatrical concept. In the book, Vitruvius gives the cue

1. Jocelyn Penny Small, "Circling Round Vitruvius, Linear Perspective, and the Design of Roman Wall Painting," *Arts* 8, no. 3 (September 14, 2019): p.2, https:// doi.org/10.3390/ arts8030118

2. Samuel Y. Edgerton, "Brunelleschi's Mirror, Alberti's Window, and Galileo's 'Perspective Tube'," *História*, *Ciências, Saúde-Manguinhos* 13, no. suppl (October 2006): p.159, https://doi. org/10.1590/s0104-59702006000500010.

3. Michela Rossi, "Architectural Perspective Between Image and Building," Nexus Network Journal 18, no. 3 (September 6, 2016): p. 579 https://doi. org/10.1007/s00004-016-0311-y.

4. I:2.2, quoted in Pierre Gros, "The Theory and Practice of perspective n Vitruvius' De architectura" in Perspective, Proiections and Design : Technologies of Architectural Representation, ed. Mario Carpo and Frédérique Lemerle(London Tavlor&Francis Group, 2007), p.9

5. Jocelyn Penny Small, "Circling Round Vitruvius, Linear Perspective, and the Design of Roman Wall Painting," *Arts* 8, no. 3 (September 14, 2019): p.2, https:// doi.org/10.3390/ arts8030118 De maise francés francés francés par de la contraction entre la participa de la contraction de la participa de

Figure 1. Leonardo da Vinci, *The Vitruvian Man*, 1492

> 6. Christopher P, Heuer. The City Rehearsed: Object, Architecture, and Print in the Worlds of Hans Vredeman De Vries. (Oxford, Abingdon: Routledge, 2013),p.51

that he was also familiar with the world of theatre, stating that certain architectural forms and functions are assigned to particular scenes. Tragic scenes, for instance, are more associated with royal architecture. A similar word in Greek, *skiagraphia*, which leads to the use of light and shadow and the expansion in the understanding of scene painting, turned scenographie into a broader concept, an accumulation of perceptions.

Alberti criticized the notion of scenography deceptive⁶, stating that it depicts a limited view, which is very singular; therefore, it is impossible to acquire the necessary and wholistic architectural information from the drawing. This is also since scenographie is not supposed to include any measurements; on the contrary, the drawings are based on a modular system called symmetria. For Vitruvius, symmetria was the explanation of proportion, with which he could create a harmonized and proportioned whole constituted by the modularity. He familiarized the idealized ratio of a human being's body, which represents the ultimate criteria of proportion and for a building to follow as well.⁷ Nevertheless, the indisputable evidence of Vitruvius' modularity later depicted by Leonardo da Vinci, Vitruvian Man(Fig. 1), could not convince Alberti to deem scenographie as a duty of an architect. Instead, he assigned it to the painters.⁸

Unlike Alberti, Sebastiano Serlio(1475-1554), who followed the Vitruvian tradition, assumed that painting was the basis of an architect. In fact, he believed in a strong relationship between architecture and perspective. To be more exact, he treated them as inseparable concepts. "La prospettiva e molto necessaria a l'Architetto, imo il perspetico non fara cosa alcuna senza l'Architettura, e l'Architetto senza prospettiva" stated Serlio⁹, which is translated as "Perspective is very necessary for the architect, the perspective would do nothing without the architecture and the architecture nothing without the perspective." Perspective offers more than the focus on a singular view but abounds a rich architectural experience, playing with depth, light, and shadow, as the Greek word skiagraphia offers. It has the power to control many scales, from the description of an object to an urban view. Hence, his statement was accurate, throughout the time, architecture and perspective, as a result art, became the subjects of each other. This is the very basis of the interchangeability of the scale.

Serlio was an important figure since he established the balance between antiquity and Renaissance architecture. He comprehended the power and flexibility of paper and ink, enabling painters to invent with a wrist move.¹⁰ Serlio seized the possible architectural impact that a flat media, like canvas, could have. He recognized that his architecture would be trapped in his drawings. For him, perspective was a quite communicative tool that shows the viewers their seats in the view, which could be the reason why he focussed on stage design, that is to say, scenographie. He opined that perspective should be taught viva voce.¹¹ Hence, his scenographic drawings (Fig. 2) elevated from the ground appear as if they were presenting the play, in this case conveying the architectural idea, to the spectators.

Of course, as an architect and a person interested in stage design, it was ineluctable for Serlio not to study the essence of the proportion and movement of a human body. By analyzing a stationary body, he applied a more anatomical approach under the influence of Leonardo da Vinci who brought Vitruvius' definition of the proportioned body to life. Once the proportion of a motionless figure was understood, it was easier to envision its movement in the space.¹² However, Serlio's reference to antiquity, more precisely to Vitruvius, was certainly not limited to the study of figures. As a Renaissance man, he needed to dig into the classical antiquity where he must have come across with De Architectura Libri Decem, thus the teachings of Vitruvius, which were highly appraised among the Renaissance architects in Italy. Serlio became the author of the remarkable treatise called Tutte l'opere d'architettura et prospetiva where he combines his studies on architecture and perspective. Especially his fourth book(1537)that enlightened his readers about the five-column orders became phenomenal. The book, as a result Serlio, became the messenger of the Italian Renaissance in the North countries.

Serlio's fame was developed unwittingly, thanks to a mediator Alberti could not have. Alberti became obsessed with the idea of an identical recreation; to Alberti the merit of repeatability was what was extraordinary and radical of perspective.¹³ However, perspective, the

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7. Ingrid D. Howland and Thomas Noble, eds. *Ten Books on Architecture. Vitruvius.* (1999)p.47 quoted in Jocelyn Penny Small, "Circling Round Vitruvius, Linear Perspective, and the Design of Roman Wall Painting," *Arts* 8, no. 3 (September 14, 2019): p.10

8. Pierre Gros, "The Theory and Practice of perspective in Vitruvius' De architectura" in Perspective, Projections and Design : Technologies of Architectural Representation, ed. Mario Carpo and Frédérique Lemerle(London, Taylor&Francis Group, 2007), p.10

9. Sebastiano Serlio, Secondo Libro, fol.25v

10.Sabine Frommel, "Sebastiano Serlio prospettico" in Perspective, Projections and Design : Technologies of Architectural Representation, ed. Mario Carpo and Frédérique Lemerle(London, Taylor&Francis Group, 2007), p.77

11. Heuer, "The City Rehearsed", p.52

12. Jean Julia Chai, "From a Painter's Perspective:The Introduction to an Illustrated Manual on Painting Attributed to Serlio" Journal of the Warburg and Courtauld Institutes 79(2016), p.69 https://www.jstor.org/

stable/26322519

13. Heuer, "The City Rehearsed", p.166



Figure 2. Sebastiano Serlio, *Comic Scene*, 1545

> 14. Krista De Jonge, "Early Modern Netherlandish Artists on Proportion in Architecture, or 'De Questien Der Simmetrien Met Redene Der Geometrien," Architectural Histories 2, no. 1 (2014): p. 1, https://doi. org/10.5334/ah.bt.

15. Dieter A. Nuytten, "Theory and Example in Vredeman de Vries's Architectura. Intentions Between a Modern Treatise and a Practical Model Book" in *Hans Vredeman de Vries and the Artes Mechanicae Revisited*, ed. Piet Lombarde (Turnhout, Belgium: Brepols, 2005),p.37 illusion created with the help of Euclidean geometry and Vitruvius Man, in other words, the science of art and proportion, could reproduce the image only to a certain extent. As long as his window through which soon-to-be-copied object can be observed was stable, creating an accurate but not identical image was achievable. The technology which was inadequate in Alberti's time made it possible to spread Serlio's ideas. The prints and the books were agents that enabled new architecture objectives to travel beyond the Italy's borders. Printmaking turned the whole world into a laboratory/library where everyone can learn and contribute.

In this analog database, a translator has an incontrovertible role. In the Northern world of architecture, the polyglot who changed the architectural orientation was Pieter Coecke van Aelst(1502-1550), a Flemish figure entitled with many disciplines. He was starring in the proliferation of Renaissance architecture in the 16th century, more precisely after 1539, in which he published two assiduous and fundamental books that interest the topic of this dissertation. He had been to Italy, where he became familiar with antiquities¹⁴, which enabled him to create a "forum"¹⁵ for his fellow artists and architects who had not been to Italy.

The first one of the abovementioned books, called *Die Inventie der Colommen*, could be regarded as the birth of Vitruvius in the Low

Countries. It was the first Dutch adaptation of the Vitruvian tradition where Coecke annunciates an architect's notion by distinguishing the design and construction.¹⁶ Published two years after its release, the second book transcending the former is the translation of Serlio's fourth book, where the column orders take the lead.

Pieter Coecke van Aelst kept his audience large enough to dedicate the first book to painters, sculptors, stonecutters, and the lovers of antique buildings. The introduction that builds a common ground among many fields invited young and enthusiastic Vredeman to evolve his spectrum when he came across both publications. The power of reproduction manifests itself once more, considering that he copied them in an "assiduous" manner, as Van Mander narrates.¹⁷ He involved himself in the magic and science of perspective, a concept that brings many disciplines together: such as art, architecture, engineering, science. At this point, perspective unlocks another layer: the chicken-egg scale. The concept of perspective could have been affected by the scholars' multidisciplinarity; that is to say, they were capable of mastering many majors. On the other hand, the concept itself could be multidisciplinary, which forced classical humans to be interested in many subjects. This dilemma creates obscurity of whether the perspective entailed versatility in Vredeman's prosperous career or he was already seeking the abundance in his works.

The books moved young painter from one addressed in the preface category to another. Vredeman was pulled into the architectural world where he met Vitruvius and Serlio. He let these two significant figures build the foundation of his belief system in architecture. After rooting himself in classical antiquity and its revival Renaissance, Vredeman started the blending process. He started to recognize the intellectuality in the architectural design¹⁸ as Pieter Coecke van Aelst aspired to convey.

Not engaging himself with scenographie was out of the question for Vredeman. This genre, in time, became the esquisse surface of his art, architecture, thoughts, and experiments. It was a facet where his blending was evident. He showed that he had the merit to find a middle way to balance two different definitions of the scenographie mentioned above. In his early drawings and prints, scenographie was used in a more Vitruvian tradition where "symmetry and harmony" are amplified.¹⁹ There was a strong sense of geometry 's existence as the facades converge towards the vanishing point, which is off-center. The images in which he rehearsed his developing Renaissance architecture also tended to adapt Serlio's method and generate dramatic scenes with the insertion of figures. Later, in his publications, this synthesis led to either confusion or a stronger merge of two figures. He confuses Serlio with Vitruvius.

Albeit the strong connection that Vredeman created between Vitruvius and Serlio, the topic of proportion and modularity entails Vredeman to choose Vitruvius over Serlio, who included dimensions in his publications. Vredeman believed in the power of proportion as much as Vitruvius did, which is why his books do not include measurements. His compass(Fig. 3) could be the representation of this modularity, a reference to Vitruvius' circle. The adaptability and modularity were quite essential in his whole discovery of architectural spaces. During the quest for harmony, he learned how to filter and combine his interests, like he did in his architectural paintings. His innovativeness turned him into a pioneer. He became one of the 16. Heuer, "The City Rehearsed", p.46

17. Van Mander, fol.226r quoted in Christopher P. Heuer, *The City Rehearsed: Object, Architecture, and Print in the Worlds of Hans Vredeman De Vries.* (Oxford, Abingdon: Routledge, 2013), p.39

18. De Jonge, "Early Modern Netherlandish Artists on Proportion in Architecture", p.7

19.Barbara Uppenkamp, "The Influence of Hans Vredeman de Vries on the Cityscape Constructed like a Picture."' Hans Vredeman de Vries and the Artes Mechanicae Revisited, ed. Piet Lombarde (Turnhout, Belgium: Brepols, 2005),p.121



Figure 3 Hans Vredeman de Vries by Hendrick Hondius, 1610

> 20. Heuer, "The City Rehearsed", p.51

first representatives of architectural painting, one of the symbols of the Dutch Renaissance. He was revolutionary; he created a series of drawings that broke Alberti's prejudice. They effaced the singularity of perspective by repetition.²⁰ This plurality, in the end, formed a path to Vredeman's world, which will be elaborated on in the following chapters.

Perspective

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III IMAGE AS ARCHITECTURE: FROM 1:1 INTO FRAME

If they were contemporaries, René Magritte might have said that Vredeman's images could never be architecture. He would have made a point, considering that they are the images or representations of architecture; however, Vredeman would have disagreed. Within his frames, not only does he produce drawings and paintings, but he also brings his learning and mastering journey of architecture to light. Each setting conveys a message of his architecture through his ink and paper. Sebastiano Serlio, who was one of Vredeman's idols, as indicated in the previous chapter, gave countenance to his argument. The introduction of Serlio's second book addressed architects and painters since he deemed that architects were painters in the first place.²¹Examples were in front of his eyes and crystal clear: Leonardo, Alberti, Rafael, and many others. This indicates that drawing was the primary way of designing²² in the Renaissance, even earlier considering the Vitruvius' indications. Vredeman displayed a great assiduity to learn Italian Renaissance through prints, which were twodimensional media products. He knew that the canvases were not just an accumulation of lines but an idea and a style of architecture.

The most objective and clear evidence of Vredeman's scale change between art and architecture is presented again by Vredeman himself. Through his publications, he explicitly displayed how he entitles himself. His first series, called *Scenographie sive Perspectivae* published in 1560 by Hieronymus Cock introduces 34-year-old Hans Vredeman de Vries as a painter, not as an architect. The deduction could be that he had not practiced architecture enough by drawing to be regarded as an architect, which proves that the flat canvas was considered as a medium to study his intended real-life work at that time. Therefore, this part of the title "à pictore Ioanne Vreedmanno Frisio ingeniosissime excogitatae & designatae(devised and designed by the painter Vredeman)"²³ underlined that these views were still a piece of art but not architecture.

Following the first series, when he published his first book of columns, *Dorica Ionica(1565)*, he took a moment to share his motive with the readers. What is crucial in the introduction is not how he designated himself but rather whom he addressed. He enlarged the group of his target readers and dedicated it "zu dem kunstliebenden Leser(to the art lovers)"²⁴ like Pieter Coecke van Aelst did. By speaking to a larger group of readers, he acknowledged that his drawings were more than art and could bespeak to people with different backgrounds. Thirteen years later, Vredeman felt confident enough to clarify his position in the second version of the book(1578) by signing it as the 'architector.' He admits that his architecture is getting shrunk into his drawings. He even used a scale that combines both art and architecture, as he declared himself as the 'inventor' in his treatise called *Architectura*(1577).

The word 'inventor' indicates more than who is behind drawing as an act; it defines who brings the drawn scene into life and how the frame is constituted. How Vredeman's perspective finds its place in his designed frames recites his architectural story, as "the domain of invention lay at the literal periphery of the scene."²⁵ As stated at the beginning of Scenographie sive Perspectivae, the first engraving (Fig.4) appears as the representation of an imaginary place that hosts the publisher Hieronymus Cock as a figure. This work can be considered one of his earliest experiments, whose architectural character is modestly suppressed by its artistic quality. Considering the era in which this drawing was completed, the constructed frame explains its architectural narrative more than Vredeman thought. This imaginary scene represents a certain mindset that Vredeman had; his ideal, his dream.

This first scene is mentioned as an artist's work, yet the experimentation of a studious architect can also be recognized on its plane surface. Vredeman's lines welcomed the initial characteristics of Renaissance in this fictional scene, which suggests his architectural fantasy. It is no surprise that he was impressed by this style born in Italy

21. Pietro Roccasecca, "Sebastiano Serlio, Placing perspective at the service of architects" in Perspective, Projections and Design : Technologies of Architectural Representation, ed. Mario Carpo and Frédérique Lemerle(London, Taylor&Francis Group, 2007), p.97

22. Heuer, "The City Rehearsed", p.46

23. Petra Sophia Zimmermann, "Hans Vredeman de Vries ein "uomo universale" Bulletin Knob (2001). p.3

24.Ibid., p.2

25. Heuer, "The City Rehearsed", p.39



Figure 4. Hans Vredeman de Vries, *Scenographie sive Perspectivae*, Antwerp, 1560. Etching (published by Hieronymus Cock)

> 26. Dieter A. Nuytten, "Theory and Example in Vredeman de Vries's Architectura",p.48

last de Cock coken om tuolcher Voille

after deeply adopting Serlio and Vitruvius's works and perceptions. Moreover, the 16th century was when the Renaissance also started to be recognized in the Netherlands, as not only Vredeman but also some of his contemporaries like Cornelis Floris were keen on Renaissance.

Renaissance is the age of symmetry, proportions, repetition, geometry. Starting from the general layout of the first engraving, the perspective view leads the gaze to a central point where an urban square - likely a piazza- is located. This hints that Vredeman was also paying attention to the urban plan. Each facade in the imaginary street has a symmetry axis. The geometry of the buildings is quite simple and similar, which gives an idea about the plan of the buildings as well. The facades display a rhythm composed of the repetition of the proportioned openings. The traces of the column orders depicted by Vitruvius and Serlio corroborate that Vredeman had already studied them and started to establish what he learned. The building on the left presents a variety of columns with respect to the spatial functions. Vredeman later elaborated on this relation between these orders and their functions in his book Architectura whose chapters are organized under the name of the column types, inspired by Serlio's book. The ground floor is composed of Doric columns, which were usually associated with the dwelling function. As the eyes of the spectator move higher, the change in the orders can be detected. The ones on the first floor are the Ionic columns whose function is not fully elaborated; however, they are considered a little more luxurious than the Doric order. The second floor accommodates the Corinthian order, which is deemed as more dignified compared to other two.²⁶Although the



function of the building cannot be precisely propounded, it can be assumed that the importance of the spaces increases from bottom to top, as Vredeman's hierarchy offers.

At the left bottom, where the Doric type follows the perspective lines to the vanishing point, a gallery space presumedly tried to be created. Galleries were also the architectural spaces that appeared in the medieval residences of the Low Countries.²⁷ His interpretation of combining the vernacular and Renaissance elucidates his intention: the architecture that merges the characteristics of North and principles of Italian Renaissance.²⁸

Galleries are depicted not only in the exterior space but also in his initial interior drawings and engravings. Figure 5 presents an imaginary enclosed inner space that Hans Vredeman de Vries designed and published in the same scenographie series. The narrow corridors defined by the repetitive columns reach a closed square where the sides are defined with gallery spaces. The rhythm and the repetition of columns and the tiles on the floor are the most striking elements that strengthen the sense of perspective. The plan has a strictly orthogonal configuration.

There are only two types of columns in this scene. The Doric columns invade the whole ground floor, whereas the second floor recalls the Caryatid order. The latter is the acknowledgment of the antiquity, with which Vredeman was acquainted. While examining the columns, one aspect draws attention to the right upper corner: That Vredeman signed the drawing as the "Inventor." It can be assumed that de Vries had been aware that art and architecture have always

27. Dieter A. Nuytten, "Architectural and Technical Examples: Between Antique Modernity and Gothic Tradition" in *Hans Vredeman de Vries and the Artes Mechanicae Revisited*, ed. Piet Lombarde (Turnhout, Belgium: Brepols, 2005),p.62

28. Petra Sophia Zimmermann, "The Relation to Practice in the Publications of Hans Vredeman de Vries" in Hans Vredeman de Vries and the Artes Mechanicae Revisited, ed. Piet Lombarde (Turnhout, Belgium: Brepols, 2005),p.20 Figure 5. Hans Vredeman de Vries, *Scenographie sive Perspectivae*, Antwerp, 1560(published by Hieronymus Cock)



Figure 6.

Hans Vredeman de Vries Scenographic view of Antwerp Town Hall, Antwerp, 1564 (published by Hans Liefrinck)

been interrelated, and the engravings he produced were his way of inventing.

Despite the lack of the dimension of depth, the images cannot refuse to talk as to Vredeman's architecture from their twodimensional world. It is contradictory to name them scenographic drawings but to eliminate their architectural information at the same time. As an admirer and follower of Vitruvius, Vredeman must have

known that scenographie is following the ground plan and elevation to enable himself and the clients to picture the proposal.²⁹ He might have been using the scenography to convince himself of his architecture. The idea of persuasion with the use of scenography is apparent in his woodcut of the Antwerp Town Hall, which was built between 1560-64. The winning project of the competition, in which Vredeman also participated, was the design presented by his contemporary

29. Gros, "The Theory and Practice of perspective in Vitruvius' De architectura", p.9

Cornelis Floris. However, it is assumed that Floris was not alone, given the argument that he could not even design the plans and the staircases by himself.³⁰ Being a sculptor, his background was also rather artistic, as Vredeman's, which is why they were not a part of the builders guild. Thus, Vredeman solely aimed to produce instances that show the practical applications of Renaissance architecture.³¹ He wanted to convince the artists, architects, builders, and others related to the whole picture. In the case of Antwerp Town Hall's scenographic woodcut(Fig. 6), which must have been completed after the construction of the building, Vredeman was trying to persuade the authorities, to be more specific, the city council. The same technique that he used allegedly to express his art is now used to deliver an architectural idea, in fact, an urban objective. He used the scenography exactly like Vitruvius defined, showing the facade and the side vanishing into the background to show the desired scene in which the built architecture ought to be placed. Not only did he show how his quite symmetrical and proportioned façade, but also he displayed the intended public life, which transforms the woodcut into a stage design. Once more, he combined the teachings of old and the addition of new.

Additionally, by placing the town hall in an imagined urban context, he created a tension between old and new with the use of facades in different styles. The left part of the woodcut promotes the Renaissance architecture again on the city scale, with which he invited the city council to focus more on urban planning.

Another work that symbolizes the threshold of Vredeman's understanding of art and architecture is Figure 7, a copper plate of People of Ninenveh, which was formerly designed as a tragic scene interpreting the religious story in the urban context of a Renaissance city.³² In other words, he clasped the antique, then put it in the middle of the modern. Although the configuration of a tragic scene does not completely match Vitruvius' understanding of the scene, it still contains some traces. As stated in chapter one, Vitruvius's tragic scene hosts the architecture related to power, sophistication, or royalty; what one witness here regarding the tragic scene architecture is not in the foreground. On the contrary, an edifice, which shows the properties of church architecture, appears at the back. Apart from that, the building with the tower on the left is entitled to the town hall, which has a rather sophisticated function as well. After designing the scene, which was a constructed stage, he prefers to eliminate the figures representing the tragedy(Fig. 8), turn his art into a model with which he contributes to the spread of his ideal architecture. In his treatise Architectura, he included the same scene without the People of Ninenveh, marked the buildings to explain the buildings' architectural narrative. This is where Vredeman changed the scale of the frame's notion without the actual act of scaling. His art becomes his architecture.

30. Dieter A. Nuytten, "Theory and Example in Vredeman de Vries's Architectura,"p.45

31. Ibid.

32.Barbara Uppenkamp, "The Influence of Hans Vredeman de Vries on the Cityscape Constructed like a Picture,"p.118

33.Zimmerman, "Hans Vredeman de Vries-ein 'uomo universale'?", p.7 Drei Gebäude hat Vredeman durch die Bezeichnung mit Buchstaben aus dem Zusammenhang herausgehoben: das Gebäude A zeigt ein Stadthaus, die Gebäude B und C jeweils ein Wohnhaus Vredeman did not need to reiterate that building A was the town hall and B and C were ordinary houses³³. The individual elements of symmetria, which are the steps to his whole architecture, enable the reader to analyze and read his architecture through his work, which derives from his lines' power. In this case, the function-façade interdependency is already unveiled and readable. The next two examples aim to elaborate on this with comparison.

The tableau called *HetBloedbadvanhetRomeinseTriumviraat(The Massacre of the Roman Triumvirate)* (Fig. 9) is a scenographic painting on which Vredeman and Gillis Mostaert worked together. In the scope



of his expertise, Mostaert contributed to many drawings of Vredeman with the insertion of figures³⁴, which represented the symbolic message of the theatrical scene. However, the painting's political attitude is not the topic to be illuminated, but the architectural approach on which the figures are carefully placed.

Compared to his first scenographic series, this painting offers a broader comprehension of the urban context thanks to the layering Vredeman used. An observer can understand the directionality, the city's overall layout, how far a street goes, and where the gaps in-between the buildings are. This is the combination of the communicativeness of perspective and the ingenious configuration of the elements of the painting, which takes the viewer into Vredeman's world. Needless to say, repetition, rhythm, proportion, and symmetry are again dominant elements that are prerequisites for the consistency in Vredeman's works, in which he highlights Renaissance architecture.

An interesting factor is that the dynamics of the scene exclude the observes, unlike what Serlio did. He built his scenographic drawings on a platform, which creates the atmosphere as if the viewer was watching a scene. However, the viewer here is omniscient; the Figure 7. Hans Vredeman de Vries , *The People of Niniveh*, before 1577

Figure 8. Hans Vredeman de Vries, Architectura, Antwerp 1577

34. Heuer, "The City Rehearsed", p.53



Figure 9. Hans Vredeman de Vries & Gillis Mostaert, *Het Bloedbad van het Romeinse Triumviraat*, 1570

dramatic tension is created between the figures, where the royalty is watching the scene from a higher level. Even though oneis not told the narrative performed by the figures, it is still possible to understand where the nobles are standing, Vredeman's architecture whispers to the spectators. Besides being elevated, the use of Corinthian columns on the left side reveals the portico as an entrance to a higher status building. Regarding the fact that the painting was completed a couple of years after the release of his books of columns, it contains generous use of different types of columns, which clarifies the functions in the city context.

Vredeman presents even more information that the typology of the entrances can expose. In his book *Architectura*, he introduces an entrance design associated with higher social status, where a gradual transition from the façade into the hall appears through a large porch on the facade.³⁵ In light of this information and the column functions introduced by Vredeman, the third building from the right can be interpreted as a noble man's house. The building next to it on its right is supposed to have even more sophisticated residents because the façade hosts both Ionic and Corinthian orders. The building entrance is also elevated, reached by stairs as if it represents a higher stage one should climb up.

The last example of this chapter belongs to the last years of Vredeman's life. The painting called *Salomo en de koningin van Sheba(Solomon and the Queen of Sheba)*(Fig. 10) dates back to 1601, eight years before Vredeman's death. He did not complete this painting alone as well; he collaborated with another painter, Pieter Isaacsz. This painting exhibits a quite similar but more compact configuration compared to the previous example. Old Vredeman's architecture still showed a high resemblance to his younger version but evolved as time passed. In other words, he used almost everything that he has learned from its practice throughout his career. Grotesque, strapwork, gables, caryatids, Ionic, Doric, Corinthian orders; everything he practiced comes together and celebrates the richness of Renaissance architecture and sails towards the Gothic tradition.

35. Nuytten, "Architectural and Technical Examples," p. 80



Three years after completing this painting, Hans Vredeman de Vries sought to be entitled as a professor. After studying and inventing for 77 years, he was convinced that he acquired the necessary knowledge and was ready to transfer this knowledge accumulated through experience, through his ink and paper, to the future students of perspective, engineering, and architecture.³⁶ Although it was rejected, his application to the Leiden University proves the hypothesis that this chapter is trying to clarify. His process of exploring, learning, mastering, and inventing was accomplished. By framing his architecture, his metamorphosis was complete.

Figure 3.5 Hans Vredeman de Vries 6 Pieter Isaacsz, Salomoen de koningin van Sheba, 1601

36. Heuer, "The City Rehearsed", p.1

ARCHITECTURE AS IMAGE: FROM FRAME TO 1:1

Engraving lines onto a metal plate. Finding a deeper dimension on a twodimensional surface. From single to multiplication.

Printmaking stands as a picture plane in the discussion of the conversion of the scale between art and architecture. It is both a frame and a mirror; it captures the talent and ideas and reflects them to its audience. If to exaggerate, it creates a portal from one surface to another during the production process, from original to reproduction. It transforms itself into an idea that is ready to be spread.

Hans Vredeman de Vries was ready to embark on the ideas inherited from Vitruvius' time until Renaissance in Italy. He benefited greatly from the proliferation of printing to do so. His works demonstrate an excellent command and blending of Italian Renaissance architecture for a man who had not been in Italian boundaries. Presumably, he was not familiar with the Italian language as well; yet he had the full knowledge of the architecture of Vitruvius and Serlio. The term "reproduction" here gains immense importance for enabling Vredeman to grasp the essential outputs that shaped him into who he was. That is to say; he built his art and architecture, and every scale in-between, brick by brick, by going through the reproduction of the originals: such as books, prints, engravings, etchings. Vredeman was conscious of this construction of his knowledge and intellect; he was objective enough to watch himself behind glass as an outsider. This lays the foundation of his transparency that appears in his works. He demystifies his process and allows his audience to know how he transformed himself as he practiced more, as stated in the previous chapter since his definition of the term architect derives from "practice and design"³⁷.

The reason for his transparency does not only originate from his willingness to show his capability to transform himself into an architect. He knew what he could achieve with a plane surface. Vredeman de Vries was a visionary man with self-observation awareness who must have realized the impact that reproducibility had on himself. Hence, he presaged the value of engravings and prints and translation, and could comprehend the influences his products possibly could have. He even understood that he could reach and influence a larger audience, which is why he had his books published in different languages.

Eventually, he became "ein uomo universale" as Zimmerman stated³⁸, not only because he was endowed with the ability to master different disciplines, but also he aimed further than the Netherlands, which made him "geografisch vrijwel onbegrensdef (geographically almost unlimited)."39

It would be an understatement to claim that he was only influenced by the written and printed world. In the 16th century Antwerp, under Mannerism, there were already some built examples inspired by Renaissance architecture that Vredeman could witness. In other words, he could observe what had been built from an image based upon the Italian Renaissance. Nevertheless, this contains an interpretation and a blending while moving the idea from the frame into 1:1 scale. While the books and the engravings presented the idea as close to the original as possible, built architecture showed the possible interpretations of these ideas. These observations introduced him to the dichotomy of the scales, which he embraced and later harmonized. "For Vredeman, the idea of architecture drew precisely upon [...]trait of hybridity, hybridity wrenched from the intellect"⁴⁰.He was well aware of the two edges, art and architecture, and of the scales in-between them. It is safe to say that Vredeman was building an image, an image vet with a plan. His method was unprecedented and to the point. His intellect was indeed giving dimensions to his lines slowly, starting from the ornaments, passing through grotesque, and

becoming architecture.

The Dutch architecture welcomed the Renaissance with ornamentation; so did Vredeman. Ornaments were necessary for both Renaissance architecture and also its spread in the Netherlands. They were considered as an issue of independence.⁴¹ At the beginning of the

37. Dieter A. Nuytten "Theory and Example in Vredeman de Vries's Architectura,"p.44

38.Zimmerman, "Hans Vredeman de Vries-ein 'uomo universale'?

39. Barbara Uppenkamp, " De Invloed van Hans Vredeman de Vries op Architectuur en Kunstniiverheid", in Tussen Stadspaleizen en Luchtkastelen. Hans Vredeman de Vries en de Renaissance eds Heiner Borggrefe, Thomas Fusenig, Barbara Uppenkamp (Gent: Ludion, 2002) p.102

40. Heuer, "The City Rehearsed", p.115

41.Ibid.,101



Figure 11. Hans Vredeman de Vries, Multarum variarumque protractionum, 1555

> 42. Zimmermann, "The Relation to Practice in the Publications of Hans Vredeman de Vries," p.16

43. Vitruvius, *VI.5* , p. 3-4 quoted in Christopher P. Heuer, *The City Rehearsed: Object, Architecture, and Print in the Worlds of Hans Vredeman De Vries.* (Oxford, Abingdon: Routledge, 2013),p.111

44. Hans Vredeman de Vries, *Das Ander Buch*(1565) fol. 1r quoted in Christopher P. Heuer, *The City Rehearsed: Object, Architecture, and Print in the Worlds of Hans Vredeman De Vries.* (Oxford, Abingdon: Routledge, 2013), p.115 rise of Vredeman's Renaissance, he started by practicing and designing strapwork cartouches.⁴² These prints, belonging to the mid-16th century, were produced earlier than his scenographic drawings and books of columns. They could constitute an understanding of depth, a blurry and ambiguous state of the art and architecture, and set the basis of architectural design.

Although Vitruvius was not a fan of grotesques, in fact refusing the existence of these elements,⁴³ Vredeman found himself experimenting with this concept. The etchings he produced invited the viewers to spectate his experimentation process with the forms and figures that were not necessarily related to each other. His first examples(Fig. 11) appear to be more simplificative and focused on ornamentation, while later, he enriches the compositions with more different figures(Fig. 12&13). Forming a structure with unassociated elements was exactly what Vredeman wanted to pursue. He never wanted to generate an image of architecture depending solely on the style he admired; filtering was an essential step in creating hybridity. Ten years later, in 1565, he elucidated his opinion about the mixture of old and new:

Denn es schickt sich nicht ubel, wenn man das alte mit dem newen maessiglich schmucket.

(Because it is not bad if you decorate the old with the new)⁴⁴



If Figure 12 is examined closely, two wheels placed at the bottom can be noticed. Although it is a typical Antwerp contribution⁴⁵, it might be representing more than a usual element. The image makes the impression as if the image was ready to be moved or changed. A change can result from many things: change of time, change of location, and observer change. An exciting detail appears in the explanation of the roles in Vredeman's prints: "Vriese Inventor Cock Excudebat"⁴⁶. The word excudebat shows the process as incomplete since it indicates the continuation of the publishing period. Depending on the time, location, and observer, as mentioned above, and many other factors that have not been brought up here, the prints' role is to change. This is a hint referring to the importance of reproduction.

Moving to 1565, when his first book of columns *Dorica Ionica(Das erst Buch)* was published, his approach to the architectural elements became more apprehensible. He showed that he possessed a remarkable ability to control the scales. He did not copy the column orders that he studied in the light of Vitruvius and Serlio; instead, he created an outstanding balance of correlation between art and architecture. Vredeman took the columns apart from their context and presented them as individual elements on which he could deploy his ornaments. The intriguing aspect is that these elements also defined the function of the building. He zoomed in and then zoomed out. The ornamentation of art that he had been practicing with the prints' design found its canvas on the structural elements. The image(grotesque prints) got enlarged onto a real-life element(columns); it eliminated the state of being stuck in the middle and embraced the third dimension on a two-dimensional surface.

Figure 14 and Figure 15 from the first book highlight another aspect of Vredeman's work: It was not depicting an image that should be copied; instead, it was trying to show different possibilities. Besides columns being isolated, even some details of them appear detached from their settings. This is a sign of a subtle transition from the deductive to the inductive method. After hearing the voices of the Figure 12. Hans Vrdeman de Vries, Grote rolwerkcartouches, 1555-57

Figure 13. Hans Vredeman de Vries, Rolwerkcartouches met grotesken, 1555-60

45. Nicole Merckx and Merijke, Marijke van der Glas and William of Liège, "Catalogus," *Tussen stadspaleizen en luchtkastelen.* (Gent: Ludion, 2002) p.240 : *een typisch Antwerpse bijdrage*

46. Heuer, "The City Rehearsed", p.118



past-Vitruvius, and Serlio- devouring from the whole to the unit, Vredeman slightly started to discover his own whole. Even though the elements like columns are shown fragmentized, they appear as a part of the entirety, of a plan. His lines do not represent pleasant architectural images; he endeavored to introduce a particular style he studied by showing his options filtered through his tradition. By focussing on smaller and smaller, by reiterating some parts only with minor changes, he provided his readers with options.

When the second book, *Corinthia Composita(das Ander Buech)*, is analyzed, a similar kind of improvement stated during the grotesques' development draws attention. Compared to the following version, the first book displays a more modest approach, whereas the second book exposes the idea of hybridization more conspicuously. The insertion of disconnected elements on the column is once more welcomed. Vredeman exploded everything, played with the possibilities of the individual elements in different scales: from column orders to the motives. Eventually, the composite order(Fig.16) becomes the canvas to create a collage with what he has learned and practiced. He cuts from other orders, grotesques, and transforms them, then presents a possible idea to merge the exploded view he created, which becomes his catalog. The catalog defines the notion of an architect who "…is able to […] make a proper mixture from the previous…" as Coecke van Aelst stated.⁴⁷

The columns were not the only elements he chose to isolate; a set of gables was also on his agenda(Fig.17&Fig.18). Although it is not certain whether he started drawing the columns or the gables first, the latter is more likely to represent the transition stage from grotesque to architecture. They are the mediators, setting the balance between art and architecture. They are not structural elements, yet still strong enough to constitute an effect of the desired idea, an architectural style.

Considering that Vredeman also became an urban designer, his perception of architectural scales would not let the gables be taken as



Figure 16. Hans Vredeman de Vries, *Das Ander Buech*, fol. H. 1565

47. Pieter Coecke van Alest, *Regelen* quoted in Christopher P. Heuer, *The City Rehearsed: Object, Architecture, and Print in the Worlds of Hans Vredeman De Vries.* (Oxford, Abingdon: Routledge, 2013),p.115





Figure 17. Hans Vredeman de Vries, Den Eersten Boeck, 1565. Etching

Figure 18. Hans Vredeman de Vries, *Das Ander Buech* 1565



Figure 19. Hans Vredeman de Vries, Kleine architectuurgezichten, Antwerp, 1562 (published by Hieronymus Cock)

an individual element. Although being studied detached and as a part of his catalogue, gables were still a part of the facades which belonged to the urban image. If he had only been designing with aesthetical concerns of the lines and ornaments to create an art object, he probably would not have sought to find a place for them in the whole view. He constantly changed the scale, produced them individually detached from its context, and tested them in a three-dimensional city image that he wanted to create. The primitive images of the gables that he offered in his books can be found in his scenographie series, before Das erst Buch and Das Ander Buch were even published. The abovementioned first engraving of Scenographie sive Perspectivae(Fig. 4) is an evidence to discuss the appearance of the initial gables in an urban context. Many facades of the buildings on the right, vanishing into the left, are free of ornaments but still possess the curvilinear outline of his gables. A more straightforward example(Fig.17) is from another series called *Kleine architectuurgezichten*(1562), where the gables are foregrounded and appear to be more detailed. Overall, he demonstrated how they would fit into the city, which turns the drawings into a tool to convince himself and introduce them to his readers. He was using his inductive method again, deploying one in the whole. His mindset recalled Vitruvius' symmetria; it was vital to test the proportions and harmony in the urban context.

Likewise, a more complex organization of a perspective view is included in his book Architectura. Although there is much more to deduct from this specific view(Fig.8), the generous use of gables in the same style is still a remarkable aspect. Neither the gables nor the facades in the engraving are as detailed as the other ones that the book contains. However, they are part of a bigger whole, bigger context, compared to his previous publications. This is entirely consistent with



Indeed, his facades are the testimony of the fact that everything

the fact that Architectura is his treatise. In this book, everything started to come together as transparent to his process as possible. It was time for him to collect everything he has practiced and bring them together in a piece that justified his title as an architect, or rather an inventor. congregates. Fusing the abstracted elements, his facades appear as a compilation. They create an exciting bond; they excerpt from every scale. Facades were the first to enter Vredeman's stages, always as a member of the urban image. Vredeman started his experimentation by testing the facades' ability to convey an architectural message in

Hans Vredeman de Vries Architectura 1577



Figure 21. Lieven de Key, Gemeenlandshuis van Rijnland, Leiden, 1578

> 48. Barbara Uppenkamp, "De Invloed van Hans Vredeman de Vries op Architectuur en Kunstnijverheid,"p.93 ...waarvan de gevel bovendien invloeden van blad L vertoont.

49. Heuer, "The City Rehearsed", p.118

50. Barbara Uppenkamp, " De Invloed van Hans Vredeman de Vries op Architectuur en Kunstnijverheid,"p.95: Wollaton Hall werd tussen 1580 en 1588 door John Thorpe en Rohert Smithson gebouwd voor Sir Francis Willoughby, die een riike bibliotheek met architectuurboeken en modelgravures bezat.

a cityscape. Then he broke them into pieces and emancipated the individuals that the facades contain, such as columns and gables. Like a scientist, he goes even deeper to execute his fission to create alternatives for each unit. Now, the reader has the right to choose and combine. In the end, the façade emerges as a collage, a proper elevation leaving the Vitruvius' definition of scenographie behind. In Architectura, the facades(Fig.18) are only presented in half, which suggests the idea of symmetry of Renaissance architecture. In other words, the given facade should be mirrored in order to acquire the entire elevation. Another assumption could be that Vredeman wanted to continue the process of combination because he did not impose an architecture with particular rules and specific dimensions. On the contrary, he dictated not to copy his architecture but to adapt with the understanding of his method and an architectural style. He wanted his readers to cut and paste, create their image concerning their locality. The audience needs the core of the idea and proportion to devise their truth of the architectural image.

Soon after, these experimentations came to life and found a place in the urban context. It is no surprise that he managed to influence Dutch architecture, which had been his context from the beginning. An example, designed by the stonemason and architect Lieven de Key, is Gemeenlandshuis van Rijnland(Fig.21) in Leiden. Two gables at the edges show the traces of Vredeman's gable designs from the first book⁴⁸. Another instance with a similar and again inspired by the folio E from the first book layout is the Green Gate in Danzig.⁴⁹ His impact crossed the water and nestled on the façade of Wollaton Hall in Nottinghamshire. (Fig.22) The building was commissioned by Sir Francis Willoughby, who had an extensive library with architectural books and engravings.⁵⁰ Therefore, the architects must have become familiar with Vredeman's work and applied the book's knowledge on the façade. It is impossible not to notice Vredeman's breeze through the gables placed at each tower. This breeze even flew to the other



continents in years. How Vredeman's lines influenced the architecture in different parts of the world in a short period of time remains impressive. That he preferred to publish his work in different languages and the power of reproduction, which carved Vredeman's mind and formed it, play a considerable role in making his dreams come true. The printing enabled him to "produce work that he was never able to build himself." ⁵¹

This chapter elaborated on how Hans Vredeman de Vries' vision in his drawings and engravings hid a story and structure in various scales. It is fair to say that he wanted to create images with his lines; however, not from a painter's eyes, but an architect. He uses his talent as a painter to hide his architectural fantasy that his architect personality dreamed of. He certainly aimed to scale his images from their frame to the real world, if not himself, with the help of reproductibility. Indeed, the concept of printing changed the relationship between himself and outside world, because for Vredeman, the originality of an image was overshadowed by the importance of the distribution of the idea itself. Although he does not have any traces of built architecture, at the end he achieved more than that: He produced an image that was repeated not only in his context, in his local environment, but also in many of those which he was not even familiar with. Figure 22. Robert Smythson, Wollaton Hall Nottinghamshire, 1580

51. Heuer, "The City Rehearsed", p.122

52. Hans Vredeman de Vries, *Perspective*, 1604, fol.a2r, quoted in Christopher P. Heuer, *The City Rehearsed: Object, Architecture*, *and Print in the Worlds of Hans Vredeman De Vries.* (Oxford, Abingdon: Routledge, 2013),p.208

53. Vitruvius, The Ten Books on Architecture, trans.Morris Hicky Morgan(New York: Dover Publications,1960), p.22 Ick heb mijnen tijdt in dese conste door ghebracht Over veertich jaren daer in moeten studeren (I have spent my time in this art Over 40 years to study)⁵²

In 1604, Hans Vredeman de Vries enunciated that his whole life has been dedicated to his whim to move his lines on the toil. His book *Perspective I* hosts his declaration. He let the world know that he "…is skilful with the pencil, instructed in geometry..."⁵³

In the manner of Renaissance artists, who pursued to understand the illusion of lines, this paper deployed a mechanism in the middle of which Vredeman's frame was placed as a picture plane with the intent of grasping his illusion to build a bridge between art and architecture. This picture plane was a reciprocal frame, a window, one of whose side belongs to the world of art, and the other one is governed by architecture. The research, at the end, displays the experiences of both sides, looking from one to another, to the frame of art in the world of architecture and vice versa.

Amidst the first part of the research question, the reader is positioned in the side of art, gazing at Vredeman's architecture trapped in the frame. According to Alberti, the painter was in charge of "representing what can be seen"⁵⁴ through the transparent surface of the painting, which suggests "the real-size reconstruction of the threedimensional process of viewing."55 Vredeman indeed forges what can be seen, but the observer is located behind his eyes. His creations are the embodiments of his mind palace, where he recalls the teachings of Renaissance architecture and vernacularizes them. His imagination is where he executes his ideal architecture attentively and empirically. Bearing in mind that the places he delineates originate from his imagination, it is safe to say that an envisagement of the future with an analytical approach of his present is possible to observe according to what the American philosopher Marx W. Wartofsky suggested. His oeuvre is not just a "toy of imagination," as Wartofsky stated⁵⁶; Vredeman also passionately delivers how it ought to be accomplished. He hones his vision of the ideal built environment, better to say his "telos," in his earlier drawings and engravings, and his publications are to present the technicality.

As critical it is, Vredeman's window is not objective as well; in the sense that only he has access to this particular room and its window, the cognition of the space merely belongs to him. This is the point where he engenders a dilemma regarding what Alberti suggests. On the one hand, Alberti engaged himself with replicability of visual appearance . In this case, Vredeman does not ensure the certainty of the visual appearance since they are his imagination's goods. On the other hand, how Vredeman conveys what his eyes see is relatively objective and repeatable. Furthermore, unlike Alberti, Vredeman had the chance to benefit from printing industry. Perchance Alberti would have been relieved if he had seen that Vredeman could produce what he saw in his mind palace and which can be copied.

The criticism of the built environment and the impulse to reproduce the idea move the discussion to the second part of the research question. The perspective of the mechanism changes here; the reader is now gently invited to cross the frame and stand in the hegemony of architecture. Positioned in the world of architecture and examining his art, a beholder realizes more than a pursuit to substantiate the ingenuity of his artist's alter ego. If he had been again to practice his ideal architecture, which he developed intellectually by going through reproductions, it would not be wrong to say that his architecture became his art, his images. However, it would be a fragmentary statement. His lines have voices; they are ravening to be realized and to discover the z-axis. Vredeman's images aspire to go through the portal, to jump from one side of the frame to the other to exist in the real world, so does his architecture. Unfortunately, Vredeman could not make their dream come true, yet configured them

54.Leon Battista Alberti, *On Painting* trans. John R. Spencer (1973) p.43 quoted in Alfonso Procaccini, "Alberti and The 'Framing' of Perspective," The Journal of Aesthetics and Art Criticism 40, no. 1 (January 1981): p.5, https://doi. org/10.1111/1540_6245. jaac40.1.0029.

55. Mario Carpo, "Alberti's Media Lab" in Perspective, Projections and Design : Technologies of Architectural Representation, ed. Mario Carpo and Frédérique Lemerle(London, Taylor&Francis Group, 2007), p.52

56. Marx W. Wartofsky, T"elos and Technique: Models as Modes of Action,"in Models Representation and Scientific Understanding, ed. Robert S. Cohen and Marx W. Wartofsky (Dordrecht: D.Reidel Publishing Company, 1960), p.141



Figure 23. Hans Vredeman de Vries, Perspective I, no.1, 1604

to speak. In the end, they have been heard in different periods by different artists, scholars, and architects.

Hans Vredeman de Vries did not stand on either the black or white; he was eager to discover every hue of grey, which carries the paper's whole discussion even one step further. The merits of his multidisciplinary career or the necessity to adapt his talents due to financial reasons, as some argue, ⁵⁷ entitled him to switch the scales and explore many sub-worlds while commuting from one world to another. Regardless of what his motivation was, his works have been brought to life meticulously and wittingly. The virtue of his window's transparency crystalizes his applaudable method to enlighten his perception of art and architecture, during which his process is also brought to the daylight. Old Vredeman goes back in time, back to the circles(Fig. 21), completes his cycle, and does not forget where he learned.

57. Christopher P Heuer. "Between the Histories of Art and Architecture:Critical Reception of Hans Vredeman de Vries."Bulletin Knob, (2001)p.28: His fabled multifacedeness comes across as a function of necessity rather than of any innate genius.

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Figure 0

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Figure 2 Serlio, Sebastiano. Comic Scene, Secondo Libro, 1545, fol 67r. In Perspective, Projections and Design : Technologies of Architectural Representation, edited by Mario Carpo and Frédérique Lemerle, 90. London: Taylor&Francis Group, 2007. Figure 3 "Hans Vredeman de Vries" accessed: April 14 2021 https:// pl.wikipedia.org/wiki/Hans Vredeman de Vries#/media/ Plik:Hans Vredeman de Vries.jpg Figure 4 Vredeman de Vries, Hans. Scenographie sive Perspectivae, 1560. In Hans Vredeman De Vries And The Artes Mechanicae Revisited, edited by Piet Lombarde, 18. Turnhout, Belgium: Brepols, 2005. Figure 5 Vredeman de Vries, Hans. Scenographie sive Perspectivae, 1560. In Tussen Stadspaleizen en Luchtkastelen, Hans Vredeman de Vries en de Renaissance edited by Heiner Borggrefe, Thomas Fusenig, Barbara Uppenkamp, 210, fig.30. Gent: Ludion, 2002. Figure 6 Vredeman de Vries, Hans. Scenographic view of Antwerp Town Hall, Antwerp, 1564. In Tussen Stadspaleizen en Luchtkastelen, Hans Vredeman de Vries en de Renaissance edited by Heiner Borggrefe, Thomas Fusenig, Barbara Uppenkamp, 227, fig. 50. Gent: Ludion, 2002. Figure 7 Vredeman de Vries, Hans. The People of Niniveh. In Hans Vredeman De Vries And The Artes Mechanicae Revisited, edited by Piet Lombarde, 118. Turnhout, Belgium: Brepols, 2005. Figure 8 Vredeman de Vries, Hans. The People of Niniveh. Architectura, 1577. In Hans Vredeman De Vries And The Artes Mechanicae Revisited, edited by Piet Lombarde, 119. Turnhout, Belgium: Brepols, 2005. Figure 9 Vredeman de Vries, Hans and Mostaert, Gillis. 1570. In Tussen Stadspaleizen en Luchtkastelen, Hans Vredeman de Vries en de Renaissance edited by Heiner Borggrefe, Thomas Fusenig, Barbara Uppenkamp, 286 fig.124 Gent: Ludion, 2002. Figure 10 Vredeman de Vries, Hans and Isaacsz Pieter. Salomo en de koningin van Sheba.1601. In Tussen Stadspaleizen en Luchtkastelen, Hans Vredeman de Vries en de Renaissance edited by Heiner Borggrefe, Thomas Fusenig, Barbara Uppenkamp, 354 fig.196 Gent: Ludion, 2002. Figure 11 Vredeman de Vries, Hans. Variarum protractionum.1555 In Tussen Stadspaleizen en Luchtkastelen, Hans Vredeman de Vries en de Renaissance edited by Heiner Borggrefe, Thomas Fusenig, Barbara Uppenkamp, 237 fig. 62 Gent: Ludion, 2002.

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Figure 23

Figure 22

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INTERCHANGEABLE SCALE OF ART AND ARCHITECTURE: THE FRAME OF HANS VREDEMAN DE VRIES

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