Enigmatic Constructions

STEVEN QUEVEDO
University of Texas at Arlington

Reflections on the Future in the Fragments of the Past

Architectural images project the un-built, the imagined future. With the Quattro cento, the advent of theory and the perspective forecast new architecture for an immediate future by reinventing ancient paradigms. In the twentieth century, new forms inspired by the machine will replace classicism with an adverse rejection of the past. In Renaissance paintings, a review of the perspective reflects the revival in the studies of classical architecture, a contemplation based on the past, which foreshadows the realized architecture of the future for the next four hundred years. Beginning with the Urbino panel, *La Città Ideale* and ending with the fantastic works of Antonio Sant'Elia's *La Città Nuova* and Le Corbusier's *Plan Voisin* the perspective as a prediction for realized work shows remarkable clarity foretelling built space. Rereading the architectural perspective as a device for imaging conveyance capable of predicting spatial realization allows the perspective to serve as an insightful tool for the imagined. Yet the perspective as a drawing device operates as a meditation on spatial depth by visually representing which how the eye perceives space. It is this insight into the mind of an architect's imagination, which reveals the potential of the perspective.

As precedent for a series of drawings, *The Enigmatic Constructions*, this brief historical review of the perspective investigates how the image influences ideas in the creation of new spatial contemplations. *The Enigmatic Constructions* meditate on architecture's role in an imagined future. These analogous vignettes reveal an earth upset by environmental chaos while artifacts of architecture survey the ruins of the future. Making references to the spatial architecture of the past, machine buildings occupy the remains.

The perspective served as a visual reference tracing the ideological shifts in architectural history. Since the Renaissance, the perspective staged ideal settings based on the rediscovering of ancient classicism. Re-positioning man as center of the universe, the perspective focused on the embodied role of humankind unified within an ordered environment. It established an architectural discipline of symmetry, contained spaces and formal mastery realized in painting, sculpture, buildings, gardens and ultimately, the city. With the perspective, the drawing device mimicked how the eye reads spatial depth, and as a drawing mechanism, coincided with the advent of scientific investigation. The perspective epitomized Renaissance space being simultaneously a media of spatial conveyance as well as a cultural artifact.

How the image serves as a precursor anticipating the future is the question for all designers. Was the imagining of new space realized as predicted in the image? The answer is one in which the image does predicts certain manifestations of spatial ideas but the design of form remains a variable. Written theory and visual manifestation predict built form. The capturing of images can read consequentially as successful or futile models for the future. Architectural history is rich in imaginary predictions, yet these images are often conveyed in sterile settings. These visions show a complete world isolated from the idiosyncrasies produced by daily activity, decay or acts of war.

Alberti and Piranesi: the Fragments of the Past

In Leon Battista Alberti's *De re aedificatoria* (1452), written theory re-emerged as a practical application and process. Alberti set forth collecting ancient information relating to all means of building. Initially conceived to expound upon Vitruvius, *De re aedificatoria* united the lessons of the past with the most current and pragmatic building methods. "Being to treat of the designs of edifices, we shall collect and transcribe into this our Work, all the most curious and useful observations left us by the Ancients, and which they gathered in the actual execution of their work."[1]

His meticulous descriptions ranged from the proper selection of site, the most practical choice and use of materials, the devices for construction, the aesthetics of the ancient orders, their proper application and measure. He provided chapters on both public and private structures, clarifying their particular typology and their particular part within the city. He expounded in great length on the role of the architect, essentially re-establishing and defining the profession from antiquity. Alberti wrote on the inherent nature of human observation and the need to complete and improve built form. The publication of the *De re aedificatoria* would influence the direction for Renaissance architecture, verbally imagined a "design as a firm and graceful pre-ordering of the lines and angles conceived in the Mind, and contrived by an ingenious Artist."[2]

Alberti's text provides the foundations for a rebirth of past classical forms; the application of its visual imagery comes to light in the early Renaissance perspectives. A *capricci*, an invented view, acts as a fantastic imagining of speculative space. *La Città Ideale di Urbino*, attributed to Luciano Laurana, the architect of the Palazzo Ducale at Urbino or to the studio of Piero della Francesca, characterizes this Renaissance archetype. The exact source of this painting remains a mystery, but it has recently been suggested that Alberti had traveled to Urbino and assisted in the construction of the perspective.[3] Indeed closer examination shows buildings, which bear striking similarities to Alberti's own work in Florence. In addition, buildings in the composition resemble classical revisions of San Minialto al Monte and the Battistero. Here a dramatic shift takes place in architectural representation. Rather than conveying a flat two-dimensional stage set for the depiction of a religious or political narrative, architectural space is the emerging and dominant theme. The city operates as the central organizational device. The representation of *palazzi* and churches are widely variant, but still restrained to collectively define fixed and volumetric space. The constituency of buildings acts in unison for the creation of inhabitance, and consequently, ritual. The phenomenon of articulating spatial unity served as a definitive model for realized urban spaces.

The *Ideal City* is often used as a foreword in the discussion of urban design. In the Piazza and Palazzo Piccolomini at Pienza (1458), Bernardo Rossellino, Alberti's student, created the ideal space reiterated in the Urbino panels. Alberti prescribes that, "For my part I would have the square twice as long as broad, and that the porticoes and other buildings about it should answer in some proportion to the open area in the middle."[4]

Buildings and space act as the prime example of the Renaissance conception of unity and order. Here is the perfect balance of scale, hierarchy and monumentality of the human spirit. The man-made world exemplified in spatial containment set against the boundless beauty of the Tuscan landscape. The application of perspective in urban design is thus realized from the Alberti's theory and illustrated in the perspectives.[5]

The tradition of the *vedute*, idealized views, continues in Italian painting with the works of Ferdinando Galli da Bibiena, Guiseppe Vasi, Giovanni Paolo Pannini and Cannaletto. In contrast to these pure visions of classicism, the brooding perspectives of Giovanni Battista Piranesi portend an ominous forecast. The work of Piranesi presents a darker, yet more complex vision, which deviates from the Euclidean views of the classical world.

By the seventeenth century, ideas of a fixed and finite universe had given way to Newtonian absolute space. Euclidean geometry had proven to be unreliable in explaining the complexities in mathematics. The perspective had attained extraordinary achievements in the work of Andrea Pozzo, who combined and confused built space with imaginary illusion. Simultaneously, the first signs of experiential

depiction in the perspective were being cited in the work of Johann Heinrich Lambert who "writes of the return to a natural perspective concerned with the visibility of three dimensional space for an embodied observer. He was the first to introduce the word phenomenology in a philosophy of perception."[6]

Significantly, Piranesi will advance the use of the perspective by crowding the picture plane with an exaggeration of the architecture. Piranesi uses the two-point perspective to depict a complex vastness of spaces crowded with historical references. These images reiterate the dramatic spatial investigations of Baroque Rome, but predict the obsessive collections indicative of 19th century eclecticism. Using the archeology of Rome's antiquity, Piranesi's perspectives take the theatrics of the Baroque to their most ominous conclusions. The series of plates, titled the *Carceri D'Invenzione* or *Prisons of Invention*, present a pre-industrial world of shadows, infinity beyond human scale and an intimating environment. Space is depicted elusively by gigantic structures, whose sole existence seems to be their own aloof monumentality. The *Carceri* become a graphic realization of the allegorical cave of Plato. In this sense, Piranesi's perspectives disguise the architectural forms by brief glimpses. These dark vignettes occlude a unique human centrality, dismantle the dynamics of Baroque theatre and cast long shadows of a mechanized environment. Manfredo Tafuri writes in the *Sphere and the Labyrinth,* "The invention, fixed and circulated by means of the etching, renders concrete the role of utopia, which is to present an alternative that departs from actual historical conditions, one that pretends to be in a metahistorical dimension-but only in order to project into the future the bursting forth of present contradictions."[7]

Piranesi's *Carceri* are exemplary of this upset posed to the Euclidean world. The derivation of these visions will foreshadow early 20th century views by such artists as Antonio Sant'Elia and Iakov Chernikhov. "This architecture suggests a potentially different way of recasting truth into work, a different future "order" for human life beyond the conventional opposition now clearly obsolete."[8]

Sant'Elia and Le Corbusier: Reflections on the Future

In the 20th century, classicism is challenged for its obsolescent application. Replacing the Renaissance vignette of spatial unity, the architectural image echoed with infinite views of spatial phenomenon derived from the theories of relativity, cubism and the functional aesthetics of engineering. These images promoted a future with the promise of the machine, not the canons of antiquity. Technology would provide the new architectural language. The image resonated with oblique, dynamic stills of the mechanized object situated in moving environments. Replacing the Renaissance spatial depictions set for human rituals and narrative, the 20th century perspectives promoted new technology as solutions for greater societal needs.

The Italian Futurists, founded by Filippo Tommaso Marinetti in 1910, constituted the first consciously polemical movement of the twentieth century.[9] The Futurist's manifesto called out for a complete abandonment of the past, a deliberate break from the traditions and forms of classicism. In their decree, they readily crossed the boundaries between art, literature, music, and theater while incorporating the harsh realities evident in mechanized world. Marinetti writes, "We declare that the world's splendor has been enriched by a new beauty: the beauty of speed."[10]

Initially Marinetti's writings did not inaugurate any new distinctions in painting or architecture.[11] Early Futurist painters struggled to create a unique vision, which would echo the frenzy of the Machine Age. Challenges to static, fixed imagery already explored in Divisionism and Impressionism would influence the Futurists.[12] It would however be an adaptation of Cubism where Marinetti's words for violent collision and the recognition for motion and speed could be captured. Simultaneously, the Futurists would become involved with the spatial complexities of Cubism.[13]

Umberto Boccioni's *The Street Enters the House* (1911) echoes contemporary investigations of Cubism where collision of form activates and confuses spatial depth through chaotic assemblage of human activity. Crowds of vigorous workers populate the

middle ground of the painting. They create a dynamic opposition to the static female figure, occupying the foreground. While Boccioni's conveyance of time uses cubist fragmentation, the painting still relies on perspective depth. Boccioni inverts the perspective by creating multiple picture planes that crash into each other. This device augments simultaneous activity. Despite the Futurist call for new forms, this representation of the city is still very much rooted in the traditional images of buildings. In 1914, Antonio Sant'Elia would provide a new vision to illustrate Marinetti's manifesto in a comparable, architectural vision." Architecture now makes a break with tradition. We are compelled to make a fresh start."[14]

Published on July 11, 1914, *the Manifesto of Futurist Architecture*, by Antonio Sant'Elia, would now voice a similar call for a new architecture indicative of industry and the celebration of the machine. Sant'Elia manifesto called out for an architecture, which "cannot be subjected to any law of historical continuity. It must be new, just as our state of mind is new."[15] Before Le Corbusier's critical statement for the house to be a machine for living, Sant'Elia declares, "the Futurist house must be like a gigantic machine."[16] He foresaw the challenges of modern living with the promise of new materials and construction methods. The new architecture integrated transportation and mechanical systems, which advanced and eased human life. These technological advances were not just limited to the buildings but also to the city. The machine provided a clear metaphor to convey the application of scientific method to the architectural and urban planning problems. The machine addressed the explicit problem with imminent functionality. While Sant'Elia decreed a direct pragmatism, he continued to see Architecture as the "synthesis of art and expression". [17] The Futurist's affinity for motion found clear manifestation in Sant'Elia's depictions of transportation articulated in tall elevator shafts, funiculars and train tracks arriving ceremoniously into the tall stepped buildings rising to the sky. In the series *La Città Nuova* (1914), Sant'Elia employed the two-point perspective to illustrate dramatic sweeping vignettes. Although influenced by Otto Wagner's *Wagnerschuёrn*, Sant'Elia's imagined the building as a mechanized instrument in a highly activated context. Gone is the quiet static *tabula rasa* on which buildings rested.[18]

"The street will no longer lie like a doormat at ground level, but plunge down into the earth, with multiple levels carrying the metropolitan traffic and linked up for necessary interconnections by metal gangways and fast, moving pavements."[19]

Although Sant'Elia unfortunately did not survive the First World War to see his buildings completed, his influence on later architects is remarkably evident in the early writings and executions of the Italian Rationalists, Le Corbusier and the Russian Constructivists. Le Corbusier is particularly indebted to Sant'Elia in his own proposals, set forth in *Towards a New Architecture*, published nine years after Sant'Elia's manifesto. Le Corbusier reiterates similar Futurist themes with chapters entitled "*The Engineer's Aesthetic and Architecture*", "*Eyes which do not See: Liners, Airplanes and Automobiles, and Architecture or Revolution*". In the opening chapters, Le Corbusier mirrors Sant'Elia's view to address 20th century Architecture by rejecting the traditions of academia and instead solving the questions of form and function in the same exact calculation of the engineer. "The diagnosis is clear. Our engineers produce architecture, for they employ mathematical calculation, which derives from natural law, and their work gives us a feeling of harmony. The engineer therefore has his own aesthetic, for he must, in making his calculations, qualify some of his terms of his equation; and it is here that taste intervenes."[20]

Comparatively, Sant'Elia writes, "The art of construction has been able to evolve over time and pass from one style to another while general characteristics of architecture remain unchanged. Such revolutionary changes are caused by the discovery of natural laws, the perfecting of mechanical means, the rational and scientific use of materials."[21]

In Le Corbusier's *Plan Voisin* of 1925, the new urban proposal for Paris evoked the ideas of Sant'Elia's *La Città Nuova*. While Sant'Elia proposed the engagement of new machines and transportation, Le Corbusier provided a more pragmatic solution to addressing the future of the city, one that continues to this day to be often overlooked and misinterpreted. Le Corbusier recognized the destructive nature of the automobile and its effects. Seeking sponsorship from André-Gustave Citroen, Le Corbusier wrote, "the automobile destroyed

the city, the automobile will save it."[22] Yet the *Plan Voisin* needs to be re-examined in two ways as a vision for the future. First, the *Plan Voisin* reacted to the problems faced in the 19th century industrial city by advancing the need for comprehensive planning. Le Corbusier advocated an urban design facilitated by a clear singular approach, a plan, which called for a synthesis of all urban complexities. Without organization, the dilemma of chaotic and unstructured development would continue to congest the modern city. A closer examination of Le Corbusier's urban schemes would reveal a careful balance of both the housing solutions of high-rises and the facilitation of the automobile with highways but juxtaposed by the surrounding natural world. The *Plan Voisin* was imagined as a true synthesis and equilibrium between the man-made and nature.

The second paradox, presented by the *Plan Voisin*, is how the image unfortunately predicted the modern city. Particularly in suburban freeway zones where isolated high-rises stand free of any unified context. It is a misunderstanding to assert that Le Corbusier advocated a complete disregard for the traditional city. The result of the modern suburb is more an aftermath of economics, unmitigated development, zoning and the predilection of highways than in the spirit of the new architecture. What Le Corbusier foresaw in his images was how devastating the automobile would be to the city if left unchecked. Equally overlooked is that the *Plan Voisin* also illustrated a second system of low-rise buildings. Collectively these structures would advance the same mixed-use programs incorporated in Le Corbusier's *Unité d'habitation*, integrating residential, recreational and commercial programming. The optimism of the *Plan Voisin* reveals a heroic faith in the future of mankind, an elegant new city standing in the abundance of nature. These visions created after the devastation of the First World War, offered hope toward a collective city.

The Enigmatic Constructions

Each of these perspectives used the image to convey an imagined future. The image as a prescient and possible architecture foreshadowed later built works. One based on reflection of the past, the other on the hope of the future. The immediate future is foretold and acts as an operative to forecast the spatial implications of the un-built. The consequence of imagining new worlds within the image does not necessarily guarantee realization, but has demonstrated insight into the promise and challenges of the future. Re-reading the image as reflections on the future reaffirms the power of the perspective as a viable insight of what may come. The image serves as utopian forecasts, spatial phenomenon, promising new lifestyles or even as marketing commodity.

The review of historical images from the Renaissance to the 20th century serves as graphic evidence of an aspiring architecture, reflective of their epochal ideology and the subsequently built forms the images predicted. This history addresses how images influenced a series of paintings, entitled *the Enigmatic Constructions*. These drawings depict vignettes of an architecture contemplated against an environment of impending chaos. The creation of these images combine fragments of antiquity against an architecture of the future. Built within analogous ruins, new forms occupy, monitor, embrace or destroy the ancient forms. The images combine classical drawing techniques with modern devices. Diptyches interrupt framed views. Collaged alignments retreat into linear perspective. Symbolic icons of the ancient sit in silence to abstractions of the future. As *capricci* or architectural fantasies, they tell a narrative of architecture's continuing aspirations for the future, staged against a backdrop of environmental caution and ominous historical warnings.

The process of painting in the media of watercolors requires patience in the physical act of drawing, transferring the image to the opaque paper and applying the pigments. Time is slowed between washes allowing for a quiet meditation. During this time, the mind can wander while adding graphite to the smallest details. It was in this process that a narrative linking the images was written. There are over thirteen paintings in the series. The story is projected in a non-linear fragmented text of prose, poetry and image. They represent the last remnants of a space traveler's journey in search of a lost love, read as either humanistic space, the heroics of the machine or the world's natural beauty. It is a distortion of the Renaissance epic, the *Hypnerotomachia Poliphili,* or *the Strife for Love in a Dream,* the mysterious architectural cult book. In this

Fig. 1. *Earth-City*

Fig. 2. *the Island Constructed*

retelling, the dream narrative is projected in multi-media fragments. The worlds visited are only briefly described and even their *raison d'etre* is left to interpretation.

In the first painting, *Earth-City* (Fig. 1), an ancient world is captured by a mechanized orthographic frame. Arising out of this foundation, the wall building of Le Corbusier floats against an ominous horizon. Transparent spatial volumes project from the vessel building. This vignette contemplates the dilemma of past vestiges against current preoccupations of mapping and orthographic systems. It juxtaposes a city of density and context with one of the isolated object.

In *the Constructed Island* (Fig. 2), the historical layers of the city pile upon each other. Each generation has built new layers within the confines of an older, protective fortification. Each new system is in direct conflict with its predecessor, creating larger and higher forms. Here the threatening environment is the rising sea.

The painting, *Interstitial* (Fig. 3), combines linear perspective with an orthographic section. The diptych communicates a growing isolation between the world outside and the internal processing of information. Situated in the *poche* of a cliff, the wall building has now anchored itself in quiet refuge. A monitor arrives to project collected images to the
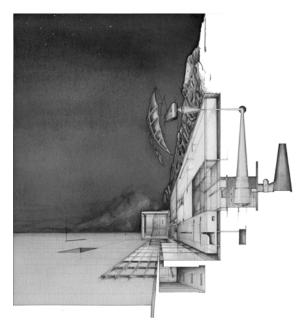

Fig. 3. *Interstitial*

occupants. These images are displayed on a great mirror in a ceremonial chamber. In the landscape beyond, Rossellino's church at Pienza is being framed and measured. The painting returns to Plato's allegory of the cave referencing our fragile understanding of truth based on how we receive images and to what ends we decipher that information.

In the companion painting, *the Secret Citadel* (Fig. 4), the new ceremonial hall has used the old foundations as its crypt. While the older forms build within the cliffs and guard against the sea, the new structure boldly expands its glazed façade to the horizon, empowered by technology to challenge nature once again. The building, being visited by the monitor, projects its own message to the outside world.

In *Monument at the Edge of Time* (Fig. 5), forms and space collide at the edge of the sea. A series of forms trail along a precipice culminating in an orthographic grid or picture plane on which lamenting figure is depicted as the only viewed human figure. The image is a
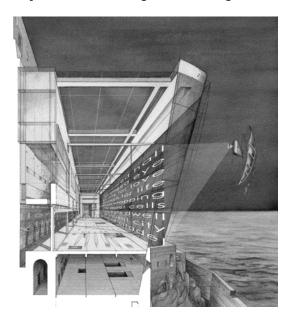

Fig. 4. *the Secret Citadel*

train wreck falling off the edge of space and time. In this cacophony is an uncertainty in regard to the future of Architecture.

Lastly in respect to drawing as a means to convey architectural ideas, the perspective is a constructive method of mapping volumetric space in two-dimensional media. Historically the perspective opened the medieval world to the realization of spatial depth. Likewise the collage would advance spatial ideas of time, infinity and simultaneity in the 20th century. Yet as more and more architects abandon traditional drawing media in favor of the mechanism of computer rendering, the quiet inherent contemplations which the act of drawing allows, letting the mind and hand

explore possibilities, drawing is in crisis. The perspective does not represent only a visual rendering of space but is a means for thinking about space and form, projecting one into a vision only imagined. It is an architectural world onto itself, an enigma constructed on paper to question the un-built. In Alberti's own personal motto, the question is always *Quid tum*? What is next? Past and future, architecture is bound by its historical referencing, yet inspired by the possible imagined.

Fig.5. *Monument at the Edge of Time*

Endnotes

1.Leon Battista Alberti, *The Ten Books of Architecture, The 1755 Leoni Edition*, trans. Giacomo Leoni (New York: Dover Publications, Inc., 1986), p.1.

2.Ibid., p.2.

3.Cristina Acidini and Gabriele Morolli, La Vittoria Postuma: Una Citta Niete Affatto *"Ideale"* in *L'Uomo Del Rinascimento: Leon Battista Alberti e le Arti a Firenze Tra Ragione e Bellezza* (Firenze: Mandragora/ Maschietto Editore, 2006), p. 395.

4.Alberti, *The Ten Books of Architecture, The 1755 Leoni Edition*, p. 173.

5.Michele Furnari, *Formal Design in Renaissance Architecture from Brunelleschi to Palladio* (New York: Rizzoli International Publications, Inc., 1995), p.133.

6.Alberto Pérez-Gómez and Louise Pelletier, *Architectural Representation and the Perspective Hinge* (Cambridge, Massachusetts and London: The MIT Press, 1997), p. 74.

7.Manfredo Tafuri, *The Sphere and the Labyrinth: Avant -Gardes and Architecture from Piranesi to the 1970s*, trans. Pellegrino d'Acierno and Robert Connolly (Cambridge, Massachusetts and London: The MIT Press, 1990) p. 29.

8.Pérez-Gómez and Pelletier, *Architectural Representation and the Perspective Hinge*, p. 78.

9.Jane Rye, *Futurism* (New York: E. P. Dutton and Co., Inc., 1972), p. 14.

10.Ibid., p. 7.

11.Ibid., p. 27.

12.Ibid.

13.Ibid., p. 25.

14.Antonio Sant'Elia, *L'Architettura Futurista Manifesto, in Futurism and Futurisms* (Milan: Gruppo Editoriale Fabbri, Bompiani, Sonzogno, Etas S. p. A., 1986), p. 418.

15.Ibid.

16.Ibid., p. 419.

17.Ibid., p. 420.

18.Ester da Costa Meyer, *The Work of Antonio Sant'Elia: Retreat into the Future*, (New Haven and London: Yale University Press, 1995), p. 39.

19.Sant'Elia, *L'Architettura Futurista Manifesto*, p. 419.

20.Le Corbusier, *Towards a New Architecture* (New York: Dover Publications, Inc., 1986), p. 15.

21.Sant'Elia, *L'Architettura Futurista Manifesto*, p. 418.

22.Alexander Tzonis, *Le Corbusier: The Poetics of Machine and Metaphor*, (New York: Universe Publishing, 2001), p. 79.