

## A "PATAPHYSICAL" READING OF THE *MAISON DE VERRE*

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The *Maison de Verre* (1928-32) is a glass-block house designed and built by Pierre Chareau (1883-1950) in collaboration with the Dutch architect Bernard Bijvoët and craftsman Louis Dalbet for the Dalsace family at 31, rue St. Guillaume in Paris, France. A 'pataphysical reading of the *Maison de Verre*, undoubtedly one of the most powerful modern icons representing modernism's alliance with technology, is intended as an alternative history that will yield new meanings of modernity. Modernity in architecture is all too often associated with the constitution of an epoch, a style developed around the turn of the 20<sup>th</sup> century in Europe albeit intimately tied to its original meaning related to an attitude towards the passage of time.<sup>1</sup> To be truly modern is to be in the present. However, it is also implies the awareness of an ever-changing present. A 'pataphysical reading of the *Maison de Verre* takes this idea further, critiquing the limits of our current view of a modernity associated with the kind of worship of modern scientific technology such as that of Le Corbusier's *Esprit Nouveau* and the Futurist movement, for while Pierre Chareau was "au fait with the vicissitudes of Cubism and Futurism", his work embodies a more Janus-like image reminiscent of Alfred Jarry's 'pataphysical time machine where the view into the past lies beyond the future.<sup>2</sup>

Alfred Jarry (1873-1907), a French dramatist and writer, renowned for his *Ubu Roi* plays, first coined and defined the term 'pataphysics as "the science of that which is super induced upon metaphysics..." Pataphysics will be, above all, the science of the particular, despite the common opinion that the only science is that of

the general...(It) is the science of imaginary solutions..."<sup>3</sup> According to Roger Shattuck, in his introduction to Jarry's *Exploits & Opinions of Dr. Faustroll, Pataphysician*, "(i)f mathematics is the dream of science, ubiquity the dream of mortality, and poetry the dream of speech, 'pataphysics fuses them into the common sense of Dr. Faustroll, who lives all dreams as one." In the chapter dedicated to C.V. Boys, Jarry, for instance, with empirical precision, describes Dr. Faustroll's bed as being 12 meters long, shaped like an elongated sieve that is in fact not a bed, but a boat designed to float on water according to Boys' principles of physics.<sup>4</sup> The image of a boat that is also a bed, at the same time, brings to mind the poem by Robert Louis Stevenson, *My Bed is a Boat* thereby achieving a 'pataphysical fusion of the two seemingly disparate worlds of science and poetry. Similarly, in "How to Construct a Time Machine", anticipating Einstein's theories of relativity, Jarry sets out to prove that to the traveler in his Machine time is reversible and because the machine always starts off in the direction of the future the past will always lie beyond the future. Jarry's 'pataphysical Time Machine is an affirmation of the need to search for an open reality that includes all possibilities as reality so that the absurd and the impossible can coexist on equal footing with the reasonable and the rational thereby presenting reality in its totality. It is also a critique on the age-old view of time analogous to a flowing river where time travels in a single more linear direction. For Jarry, without his Machine "an observer sees less than half of the true extent of Time, much as men used regard the Earth as flat."<sup>5</sup> Using Jarry's 'pataphysical

time Machine to reflect on the Maison de Verre, this paper will demonstrate how Chareau, a 'pataphysician in his own right, while working in a world where many of his contemporaries sought to escape the past, was able to fuse the seemingly disparate worlds of ancient magic architecture and modern scientific building into one.

Pierre Chareau was born in Bordeaux, on August 3, 1883, to Esther Carvallo and Adolphe Chareau. His father was a wine merchant who lost his fortune and moved to Paris to work on the railroad. Not much is known of Pierre Chareau prior to the meeting of his future wife, Louise Dyte (Dollie), from whose account we know they met when he was 16 and she was 19. Chareau worked as a tracer or draftsman from 1900-1914 for the firm, Waring and Gillow, a large British Company specializing in furniture and interior design for banks, government buildings, clubs, offices, palaces, steamships, royal yachts and railway cars. During this time he also pursued interests in painting, music, and architecture at the Paris Ecole des Beaux Arts. Dollie, who was born and raised in England, helped support them financially by tutoring English. It was through the friendship developed between one of her students, Annie Bernheim (later Annie Dalsace), that Chareau was later to be commissioned by the gynecologist Dr. Jean Dalsace and his wife, Annie, to build their new home at 31 rue St. Guillaume.

The years between 1919, after being drafted into the war in 1914, and the mid-1930s when his work began to decline, are considered Chareau's most productive years. Through the Dalsace family and their circle of friends, he was introduced to the Parisian artistic avant-garde and bourgeois milieu. He collaborated with Jean Lucat, André de Herring, Mallet-Stevens, Gabriel Guevrekian, Francis Jourdain and Jacques Lipchitz, with whom he became very good friends.<sup>6</sup> He was also among the architects from France who met in the Villa of Madame Mandrot in La Sarraz, Switzerland, in June 1928, for the purpose of founding the well renowned *Congres Internationale d'Architecture Moderne (CIAM)*. Chareau was known to have the works of Paul Klee, Juan Gris, Braque, Picasso, Chagall, Max Ernt, Lipchitz and Modigliani, hanging on the walls of his home, while his own work was often seen in exhibitions of the *salon des Artistes Decorateurs*.

The Maison de Verre was commissioned to Pierre Chareau in 1927. Its construction, which began in 1928, was completed four years later, in 1932. Chareau's idea of the architectural machine-edifice reflected in the Maison de Verre, while it continues to inspire the kind of high-tech architecture such as that of Richard Rogers, is born out of the empirical technology used in the practice of Renaissance natural magic. At the same time, it embodies characteristics of Alfred Jarry's neo-scientific theory of 'pataphysics as a systematic toying with the arrangement of things and their significance until what begins as an impossible hypothesis, even absurd, makes the leap into the concrete world. Chareau's endless devices in the Maison de Verre, like the bidet that swivels or the ventilation windows operated by cogwheels, while exhibiting the precision of a mechanic and craftsman, are clearly not wholly meant to be practical and often appear absurd.

The development of natural magic during the Renaissance was a revival of secret knowledge from ancient Greek philosophy by humanist scholars. Such human knowledge of the cosmos was thought to come about only through a mathematical and empirical study of nature itself. The belief was that every natural thing in the terrestrial world had some virtue inherent in it, associated with something in the celestial world. The role of the magician was to discover these virtues through natural philosophy by searching for signs, which linked the two worlds, and to use these to manipulate things through natural magic.

In his manual on *Natural Magick*, arguably the most popular and widely read manual of its kind, Giambattista della Porta asserts that "the works of Magick are nothing else but the works of Nature, whose dutifully hand-maid is Magick," immediately followed by the definition of human art as a technique to perfect deficient natural processes.<sup>7</sup> Even more significant is his need to distinguish between two categories of magic: There are two sorts of Magick; the one is infamous, and unhappy, because it has to do with foul Spirits, and consists of incantations and wicked curiosity; and this is called Sorcery...the other Magick is natural; which all excellent wise men do admit and embrace, and worship with great applause... Others have named it the practical part of natural Philosophy, which produces her

effects by the mutual and fit application of one natural thing unto another.<sup>8</sup>

It is to this form of natural magic that I relate Chareau's work. Natural magic, according to Porta, operates by setting things apart and putting them together in a particular way and so different animals were coupled and different plants grafted to generate new ones as compensation for what was considered lacking in nature. Chareau similarly assembled different machine parts to create a new kind of "machine for living" providing for a new way of life that he considered more suitable for modern living, compensating for what he thought was lacking.<sup>9</sup> The Maison de Verre became an assemblage of windows from trains that slide up and down, lightweight airplane stairs, and cog-wheels from ships, exposed and giving clue to how the windows opened and closed.

The analogy of the machine-edifice in architecture has a long-standing tradition that can be traced back to Vitruvius, who described the invention of machines as one of the three branches of architecture.<sup>10</sup> A literary genre referred to as the *Theatre of New Machines* became very popular during the 16<sup>th</sup> and 17<sup>th</sup> centuries. It owed its success to the printing of the first machine book that was to become the most widely read and copied, Agostino Ramelli's *Le Diverse e Artificiose Macchine* (Various and Ingenious Machines, 1588). While Ramelli's work is his own, he borrowed heavily from Heron, the best-known resource on machine technology in Greek antiquity when machines were made solely to bring the audience to wonder at the hidden powers at work in the world. Ramelli described and illustrated for the first time what at times appear to be fantastic designs exhibiting technological developments in hydraulic and pneumatic machines of the period that ranged from water pumps and siege engines to household gadgets. The influence of Ramelli's work "can be traced explicitly for more than 200 years until it merged, in the early 19<sup>th</sup> century, into the essentially modern theory of machines elaborated by engineers associated with the Ecole Polytechnique in Paris."<sup>11</sup>

Wandering through the Maison de Verre is like wandering through Agostino Ramelli's *Le Diverse e Artificiose Macchine*. Like Ramelli, Chareau's preoccupation in the Maison de Verre revolved around movement as it related

to the natural forces.<sup>12</sup> As one contemplates Ramelli's windmills, which, with the force of only one man, appear to take on a life of their own using forces beyond human imagination, it is not unlike the experience Hermann Hertzberger describes on his first visit to the Maison de Verre: "I entered a spaceship, out of this world, with wonderful panels of curved metal which you could turn or slide just with your finger, mysteriously to open up a space which had temporarily been hidden from view."<sup>13</sup>

In one of the last books to be written on the subject of natural magic by Johann Christian Wiegleb's book, *Die natürliche Magie* (1786), is a long detailed description of Wolfgang von Kempelen's famous Automaton Chess Player that toured all of Europe for an unprecedented eight years, that has been referred to as "the golden age of the philosophical toy". In Kempelen's original engravings the back view is the most unsettling. As Gaby Wood describes it, the audience must have gasped with both terror and wonder at seeing "the boxed in levers that replace the spine, and something shameful about looking at it, behind its back, so to speak, as if one were catching someone's private bionics unawares."<sup>14</sup> Similarly, one imagines the same kind of unexpected terror, wonder and shame if one were to open one of the closets or wardrobes that form the wall between the passage overlooking the main living room and the children's bedrooms on the second floor of the Maison de Verre, to discover yet another set of doors that if opened would unexpectedly reveal the toilet unit including the swiveling bidet and if anyone was found seated on it their backside would be in full view. Chareau's wardrobe also brings to mind C. S. Lewis' *The Lion, the Witch and the Wardrobe* of *The Chronicles of Narnia* (1950) where the backside of the wardrobe magically opens out into another world full of magical and dreamlike adventures. Chareau understood that the feeling of unexpected terror and wonder occurs when the world of dreams and the concrete world meet, a moment when we become conscious of our own presence in the world.

It is important to distinguish the two-fold architectural machine-edifice embodied in the Maison de Verre: one exhibits a mythology based on the human body and another tells the story of its own construction. The first is evident when comparing the original floor

plans of 1927 and 1928 to the final plans drawn after its completion. It is quite remarkable to observe the transformation from the first more conventional and rigid plans where the steel columns are trapped within the walls, and doors unfold from their hinges, to the final plans where columns, walls, closets, doors, and furniture appear, like Pinocchio, to suddenly be endowed with a life of their own, appearing more like dance notations where the columns standing erect support the walls, doors and closets like limbs sliding and moving about their pivots. With Chareau's insistence on rotational movements around pivots one cannot help but think of Heinrich Kleist's marionette in his thought-provoking essay *Über das Marionettentheater* (On the Puppet Theater), 1811: I inquired about the mechanism of these figures and how it was possible, without myriad strings on the fingers, to control the separate members and their tie points as the rhythm of their movements or dances required. He answered that I must not imagine that each member, in the various motions of the dance, had to be placed and pulled individually by the puppeteer. Each movement, he said, had its center of gravity; it would suffice to control that center, on the inside of the figure; the limbs, which are really nothing but pendulums, follow of themselves, in a mechanical way, without further aid. He added that this movement was a very simple one, that even when the center of gravity was directed in a straight line the limbs began to describe curves; and that often, when shaken in a quite random way, the whole puppet assumed a kind of rhythmic motion that was very much like a dance.<sup>15</sup>

In the case of the swiveling bidets, located in all the bedrooms, Chareau went to a lot of trouble to create something especially peculiar, which many scholars dismiss as just another of Chareau's fascination with movement and mechanization. If one were to ride Jarry's 'pataphysical Machine, however, one would very soon discover that it was not too long before, that bidets set on wheels, attached with a flexible pipe advantageously connected to the plumbing of the sink allowing them to be neatly stored under the sink cabinet, were commonly used particularly by those who could not afford a bathroom with a tub.<sup>16</sup> In the case of the Maison de Verre, there was certainly no need to take advantage of the pipes carrying water to and away from the sink, and as they were installed separately the bidets appear

absurd. Additionally, they were placed on a raised floor allowing water to drain away from the bedroom area, immediately bringing to mind Jarry's Ubu Roi marionettes on stage embodying a sense of humor in the manner of Francois Rabelais belonging to the lower strata of the human body and vulgarity of the everyday.<sup>17</sup>

The second architectural machine-edifice is more characteristic of the dome at Santa Maria del Fiore by Brunelleschi described by Marco Frascari as a machine that has in its building design, clues that make visible the working out of its mechanical forces.<sup>18</sup> In the Maison de Verre it is evident in the red steel columns and beams, the glass block and steel frame. The story of its construction begins with an elderly woman who, in accordance with a Parisian tenant law, refused to quit her lodging on the third floor of the original Eighteenth century hotel particulier. This resulted in the choice to insert beneath her floor the new construction of the Maison de Verre. The bottom floors were removed and with the use of steel columns and beams the floors above were propped up so as to remain in place. By disassociating these completely from the compartmentalizing of the new interior, the clues to the working out of its mechanical forces remain visible. Also, in 1928 the French manufacturing firm Saint Gobin introduced for the first time a square glass lens of 20cm x 20cm x 4 cm known as the Nevada-type lens whose deep edging grooves allowed for its vertical use within a steel frame. Chareau's proposal to use it to construct a continuous wall was so ahead of his time that the manufacturer would not insure its stability.<sup>19</sup> In order to avoid cracking on the lower levels, the façade had to be constituted of a steel grid in 4-block wide panels (91cm), thereby becoming the basic measure for the project's arrangement in its totality.

Many view Chareau's work, after the completion of Maison de Verre, as a "rupture" that reflected a disenchantment based "...on the impossibility of preserving architectural culture...a sort of compensatory worship of 'the dumb and the ordinary'".<sup>20</sup> Contrary to this view I would suggest that the house and studio Chareau built for the painter Robert Motherwell at East Hampton, New York, 1945, is evidence in its totality of the architecture of magic present in Maison de Verre.<sup>21</sup> It is not, as Frampton suggests "a hidden nostalgia, expressed in crude material, which brought

back in one way or another the memory of the lost glories of the Maison de Verre..."<sup>22</sup> I would instead argue that Pierre Chareau never lost sight of the future and that these constructions, which may appear as if a tower had fallen, are the residues of true magic. Once again, Chareau makes visible the magical potential reminiscent of Renaissance natural magic with the poetry of a 'pataphysician.

At East Hampton, Pierre Chareau assembled two Quonset huts, constructions of prefabricated semi-circular steel supports sheathed with corrugated iron that was the WWII American solution to the temporary housing of soldiers on foreign soil, which had exhausted its usefulness. To this, Chareau added a 36-foot-long window that had been salvaged from an old commercial greenhouse, flooding natural light into the living area. During storms, rain poured down the overlapping panes of glass "in a delicious waterfall".<sup>23</sup> The Motherwell house and studio, an assemblage of discarded machinery telling a story of dreams and possibilities in a world where there seemed to be no hope for the future, is not unlike the story of *The Little Machinery* by Mary Liddell (1926), which begins:

"Somewhere there is a Little Machinery, a magic creature. He grew up out of pieces of a steam engine that was in a wreck, an old trolley car that couldn't run anymore, and a broken automobile. This Little machinery would rather work more than anything in the world."

According to Brian Taylor, an anecdote recounted by Francis Jourdain, a long-time friend and fellow designer, at Chareau's death elucidates both his humorous and practical side: "Jourdain said that he once had a dream in which he was watching one of the old-fashioned French elevators of wood and glass going up and down. Inside the elevator was a wood-burning stove with a stovepipe attached, which extended and contracted like a telescope as the elevator went up and down. When Jourdain awoke from his dream, the first name that came to his mind as the inventor of such a machine was that of Pierre Chareau!"<sup>24</sup> Like the great Renaissance *Magi*, Pierre Chareau was everything from an ensemblier to an engineer-constructor, at the same time, his method of operation was "pataphysical, a method often described by a hyphenated series of words such as a 'pseudo-scientific-

philosophical-aesthetic-metaphysical-programme".<sup>25</sup>

As a true modern and 'pataphysician, Chareau understood that the forecasting of a future building is always an assemblage of fragments from the past. His use of techniques from Renaissance natural magic is not with an attitude of nostalgia but rather it is an adoption of a way of thinking that provided him with a means to his own inventions. In reviving memories from the past for his design of the swiveling bidets and the use of the Quonset huts, albeit with a completely new modern understanding and perspective, Pierre Chareau is affirming and reminding us that memory is the essence of humanity and so there can be no architecture without historical reference.

### Endnotes

<sup>1</sup> The term modern finds its origin from the Latin roots, *modus*, meaning measure or manner, and *hodiernus*, meaning today. Oxford English Dictionary. <http://dictionary.oed.com/entrance.dtl> (accessed August 13, 2006).

<sup>2</sup> Alfred Jarry, "How to Construct a Time Machine," in Michael Moorcock, ed., *The Traps of Time* (New York, NY: Penguin Books, 1970). The quote is from Kenneth Frampton's article "Pierre Chareau, An Eclectic Architect," in Marc Vellay and Kenneth Frampton, *Pierre Chareau* (New York: Rizzoli, 1985).

<sup>3</sup> Alfred Jarry, *Exploits & Opinions of Dr. Faustroll, Pataphysician* (Boston, MA: Exact Change, 1996), p. 21-22. *Pataphysics* is etymologically derived from Greek and the apostrophe is intended to avoid puns in French such as, "patte à physique" (physical leg), or "pas ta physique" (not your physique). Jarry, in the spirit of François Rabelais who was his master, attempted to combine disparate elements such as science, symbolism, humor and the occult into a single body of work. Many colleges of 'pataphysics are currently in existence worldwide.

<sup>4</sup> C.V. Boys (1855-1944) was a contemporary English physicist who invented the radio-micrometer and wrote *Soap Bubbles and the Forces Which Mould Them*, published in 1890, in London. In much of the chapter dedicated to C. V. Boys, Jarry paraphrases him.

<sup>5</sup> Alfred Jarry. "How to Construct a Time Machine." Michael Moorcock, ed., *The Traps of Time* (New York, NY: Penguin Books, 1970), p. 207.

<sup>6</sup> While he did not collaborate with him, it is well known that Chareau was also good friends and neighbor of Max Jacob, a writer and known advocate of Alfred Jarry.

<sup>7</sup> Giambattista della Porta, *Natural Magick* (New York, NY: Basic Books, Inc. 1957), editor's preface and Book 1, Ch. 2.

<sup>8</sup> *Ibid.*, Book1, Ch.2, p.1

<sup>9</sup> The house as a "machine for living" was a phrase coined by Le Corbusier.

<sup>10</sup> Marcus Polio Vitruvius, *The Ten Books on Architecture* (New York: Dover Publications, Inc., 1960). Reference is made in Book 1, ch. 2.

<sup>11</sup> Quoted from Martha Teach Gnudi and Eugene S. Ferguson in the preface to *The Various and Ingenious Machines of Agostino Ramelli* (Baltimore: The Johns Hopkins Univ. Press, 1976), p.11.

<sup>12</sup> We have forgotten this magic. Once upon a time refrigerators used to close magically on their own because they were pivoted at a slight incline toward the opening.

<sup>13</sup> Herman Hertzberger, "L'Espace de la Maison de Verre," *Architecture d'Aujourd'hui* 236 (December, 1984): 86.

<sup>14</sup> Gaby Wood, *Edison's Eve: A Magical History of the Quest for Mechanical Life* (New York: Alfred A. Knopf, 2002), p. 66.

<sup>15</sup> Heinrich von Kleist, "On the Puppet Theater," Philip B. Miller, ed., *An Abyss Deep Enough: Letters of Heinrich von Kleist with a Selection of Essays and Anecdotes* (New York, NY: E. P. Dutton & Co., Inc., 1982), <http://www-class.unl.edu/ahis498b/parts/week9/puppet.html>.

<sup>16</sup> Briefly mentioned by Henri-Roger Guerrand and Fanny Beaupré, *Le Confident des Dames: le bidet du XVIIIe au XXe siècle: histoire d'une intimité* (Paris: La Découverte, 1997), although

there are plenty of examples in catalogues for bathroom fixtures at the turn of the 20<sup>th</sup> century.

<sup>17</sup> Alfred Jarry particularly admired the work of François Rabelais (1495-1553) most renowned for his book, *Gargantua and Pantagruel*.

<sup>18</sup> Marco Francari, "An Heroic and Admirable Machine, the Theatre of the Architecture," *Poetics Today* (Spring 89). Brunelleschi is considered one of the greatest of the Renaissance *Magi*.

<sup>19</sup> Until then, glass block had only been used in commercial and institutional settings outside of France.

<sup>20</sup> Kenneth Frampton, "Pierre Chareau, An Eclectic Architect," in Marc Vellay and Kenneth Frampton, *Pierre Chareau* (New York: Rizzoli, 1985), p. 247. In the same article, as a reflection of this view, Frampton also refers to Rene Herbst's choice to exclude the Anik house, while clearly being aware of it, in his monograph of 1954 in memory of Chareau. It is also explicitly evident in the significant amount of documentation existing on the *Maison de Verre*, while anything on his work after its completion is rare.

<sup>21</sup> This house was destroyed in 1985.

<sup>22</sup> Kenneth Frampton, "Pierre Chareau, An Eclectic Architect," p.247-248.

<sup>23</sup> Alastair Gordon, *Weekend Utopia: Modern living in the Hamptons* (New York: Princeton Architectural Press, 2001), p.50.

<sup>24</sup> Brian Brace Taylor, *Pierre Chareau: Designer and Architect* (Cologne: Benedikt Taschen, 1992), p.36.

<sup>25</sup> Kimberly Jannarone, "Puppetry and 'Pataphysics: populism and the Ubu cycle,'" *New Theatre Quarterly* 17: 67 (August 2001), pp.239-53.