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Geometrical Behaviours:
An Architectural Mise-en-scène for a Reenactment of Lewis Carroll's *Alice's Adventures in Wonderland.*

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A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements of the degree Master of Architecture.

The content of this thesis is two-fold. The first part takes the form of an essay while the second part presents a theoretical project for an architectural installation. Using these two *modes* as different ways to address similar issues, the present work proposes to question the instrumentalisation of geometry in today's architectural practice. The work of Lewis Carroll (Charles L. Dodgson) and, more specifically, his masterpiece, *Alice's Adventures in Wonderland*, will be approached and interpreted in order to observe the participation of geometry—of Euclidean geometry—in our understanding of the notions of space and time, and to reveal their paradoxical aspect. The aim is to explore how geometry, language and nonsense bear intimate connections to our perception of space and time. Once revealed, these connections will enable us to address the following question: can architecture be comprehended and experienced as an *event*?

Ce mémoire comporte deux parties. À la première partie, l'essai, se jouxte un projet théorique, l'installation architecturale. En utilisant ces deux *modes* comme deux façons similaire de poser les problèmes, il s'agit de questionner l'instrumentalisation de la géométrie dans notre façon de concevoir l'architecture. *Alice's Adventures in Wonderland,* texte principal dans l'œuvre de Lewis Carroll (Charles L. Dodgson), sera lu et interprété afin d'observer l'importance de la géométrie, en particulier de la géométrie d'Euclide, dans notre compréhension de l'espace et du temps, deux notions à caractère paradoxal. Il s'agit d'observer les liens étroits existant entre notre perception de l'espace et du temps, et la géométrie, le langage et le *nonsense*. Éventuellement, une mise au jour de ces liens permettra de soulever la question suivante: est-il possible de comprendre et de vivre l'architecture comme un *événement*?.

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In memoriam Cécile Dupuis Dionne, pour m'avoir appris ce que signifie *l'art de vivre*.

Architecture has become an applied science. Naturally, that is not the commonly accepted idea about what architecture should be—especially from the point of view of architects who still prefer to think of themselves as misunderstood artists—but it is nonetheless the place that architecture occupies in our universities' classifications of the different fields of study. Whether architecture remains an art or, in the end, actually becomes an applied science is not the real problem, and finding the proper definition of what architecture was, is or should be does not constitute a solution. What matters is that today, in theory and in practice, architecture bears a kind of ambiguity that places it in a precarious situation. Architectural theory is often criticized and denounced as autonomous and disconnected from practice; the need and relevance of an architectural discourse is being questioned. Is architecture now reduced to being a consumers' product and shall it remain, for that reason, outside discussions around the unresolved condition of art in the "modern" world? Is not the majority of the architectural work that is being built, in our so-called industrialised Western world, problematic, caught in the self-referential mode which weights down most forms of art? Since we cannot stop all building processes and search for the appropriate answer to architecture's malaise and because, in the end, any such answer would be ephemeral, there may be a way to travel alternately between theoretical investigations and practical experiments.

"To build" constitutes a way to bring some order, to set boundaries, to transform the apparent chaos of the world that we live in into some kind of "place." "To build" is *geo-metrical* in that, through the process, we are actually giving a *measure* of the *earth*. Not only does the construction process imply "measuring" in a practical sense, but it is, like all human making, a way to hint at the ungraspable, a manner of defining our condition as human beings in the world.

In contemporary architectural practice, the aspect of "wonder" that a geometrical way of thinking generates is rarely acknowledged. In the present work, the aim is to question the instrumentalisation of geometry in today's architectural practice, focusing on the specific role played by geometry—and, to be more precise, by *Euclidean geometry*—in our encounter with the world. The main question is as follows: Can architecture be understood as a geomet-

rical "event" and, similarly, our actions understood as geometrical behaviours? This possibility will be explored through a reading of Lewis Carroll's masterpiece, *Alice's Adventures in Wonderland*, because it seems that there are, in Carroll's works of fiction, important ideas about geometry which are addressed in a indirect and fascinating way. Approaching the work of Lewis Carroll with these notions in mind, we may come to think of architecture as constituting a "process" in which space is actualised and re-created—the story that is written as this process unfolds in time.

In fact, both the literary and the geometrical sides of the work of Lewis Carroll-Charles Lutwidge Dodgson (1832-1898) seem to be appropriate vehicles for such an investigation in the way they simultaneously participate in the modern scientific debate and the realm of fiction and poetic imagination. The tight link between these two modes of thought—the "art-science" interdependence—made explicit in his work is key to an understanding of the transformations of architectural thinking since the beginning of "modernity." When I approach his work, I put myself into a certain attitude, a posture. The obliqueness of my reading is defined by the fact that in his "real" life, Charles L. Dodgson was a mathematician and a geometrician, a defender of the principles of Euclid as well as the inventor of a strange and fascinating logic. There seems to be a resonance between the two sides of his work, a resonance that I will try to reveal, sieving the words through a geometrical filter, in order to grasp how geometry intervenes in our encounter with the world, and participates in our conceptions of space, time and narrative in relation to architecture. In that sense, my reading of the work is oriented and limited.

I choose to approach Carroll's writing from an angle—as if choosing an angle in order to cross the stream with minimum power, like the little ferryboats of the town of Basel. These boats take passengers from one bank of the Rhine to the other, using the current of the river as their only source of power. A cable is hung slightly above the water and bridges the two banks in a way that is perpendicular to the current. The boat is attached to this cable by another cable, the extremity of which can slide along the main line. The "pilot" orients the rudder and creates an acute angle between the boat and the current, an angle which allows the vessel to silently cross the water (see fig. 1). Experiencing this means of transportation is poetic, as if man's "inventiveness," technology and the realm of geometry, for a brief instant, coincided in space and time. This is rendered possible by the slight angle of the boat in relation to the constant movement of water. Such a way of travelling—at an angle—makes us aware of the fact that we are bound to the conditions of our

time, that we live in a technological world and that even though we can revisit it works from the past, we nevertheless remain interpreters.

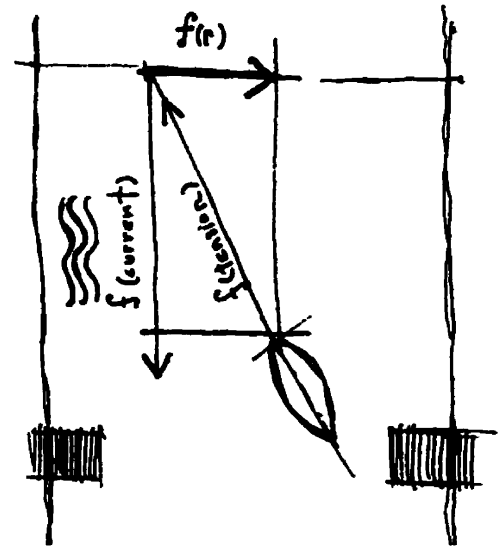

Fig. 1
Geometrical principle of the movement of the ferry boat. Drawing by the author.

The discussion will start by addressing the issue of language. There is something that is shared between building and writing: they both constitute forms of dialogue between humans, and for that reason, they are submitted to the problem of "meaning." Sense and meaning do not exactly proceed from one another in a direct way and, when it comes to nonsense, the "production" of meaning is even more complexified. If a text, or a poem, is nonsensical, we may ask how can it then convey meaning? This is paradoxical. The fascination with paradoxes is as old, among thinkers, as philosophy itself, and Lewis Carroll shared this interest. A paradox happens when two opposite notions simultaneously occupy an identical position; when both can be thought of as equally valid, therefore making the problem unsolvable. This will lead us to address the importance of the paradox as a means of expression of the "real" and to grasp how, in Lewis Carroll's work, through nonsense, meaning eventually makes its way into the readers minds.

This paradoxical aspect of words, ideas or things will lead to a discussion of the nature of the border which separates oppositional notions; the border which delineates between concepts and which is also the line that creates an opposition between them; the border (or is it rather an interstitial space?) which lies between reality and fiction, between sense and nonsense, connecting space with time, and being with becoming. In discussing the border, our

aim is to reveal the arbitrariness of the categories that, for the sake of communication, are created through language, and propose a different point of view, placing ourselves, paradoxically, within the limits. As humans, we tend to frame reality into systems and create oppositions; this is a genuine human inclination. Yet, once conceived of as "universals," as permanent boundaries, that is to say, once we become oblivious to the fluctuating nature of these categories, we may end up caught into immutable systems. I will try to emphasise how Lewis Carroll's work, because of its use of nonsense and humour, offers a potential for action in the "modern" world—a possibility to address the issues to which we are bound as architects, today.

The investigation will then travel from the realm of words to the land of geometrical entities. We will observe the major changes in the scientific mindset and how it departed from ancient cosmological frameworks and was progressively transformed in the "modern" era. This will allow us to explore how, in the work of Lewis Carroll, the geometrical ideas navigate under the surface and may be accessed from a specific angle, reinforcing Lewis Carroll's fascinating position as a geometrician of the nineteenth century and showing how he relates to the changes undergone by the concept of geometry.

We will place ourselves, again, at the limits and try to see the connections between space and time as well as the specific position occupied by geometry in our understanding of such notions. Once we come to conceive of space as something more than its Cartesian dimension, as something infused with presence and therefore no longer detached from our perception, we may realise that even though architects "make" space as they set the proper conditions for its inhabitation, we all participate in the "creation" of spaces in a way that implies embodied perception, which is never stable but changes in modes or moods, according to our posture, our bodily humours, our sense of humour. For that matter, precisely because it is a humoristic critique of our "modern" condition, the work of Lewis Carroll is highly relevant. In his work, we can read that space does not preexist, but rather, that it is constantly becoming what we make of it.

It will be important to make explicit how this creation of space is bound to our perception, and how we understand or extract meaning from this act of perceiving, through movement, in a rhythmic manner. In a sense, there may be a link between architecture, understood as our time-bound perception of a built work—an actualisation of the programmatic criteria that were imagined by the architect— and the "staging" of a plot, the "housing" of a fictional narrative in a temporary construction allowing for a theatrical performance. The perfor-

mance, within an installation, is a condensed version, in a shorter period of time, of some characteristics belonging to both the process of construction and the ways we inhabit architecture.

Hence, the content of this thesis is two-fold. Juxtaposed to the essay, a theoretical project serves as a test—an experimental field—for the ideas presented and discussed in the main body of the text. Hopefully, the project will demonstrate the links between an architectural program being actualised in our time-bound perception of a built work, and a story that can be framed, temporarily, in the space of its reenactment. On the other hand, the essay is an attempt to set a theoretical framework that allows the reader to come to an understanding of the project, to imagine its potential, not only as an alternative practice for architects today—a possibility for ethical action—but also, as another point of view, as a different way to imagine what architecture could be and how we can engage with it.

On words and paradoxes

> "One side will make you grow taller, and the other side will make you grow shorter."
>
> "One side of *what?* The other side of *what?*" thought Alice to herself.
>
> "Of the mushroom," said the Caterpillar, just as if she had asked it aloud; and in another moment it was out of sight.
>
> Alice remained looking thoughtfully at the mushroom for a minute, trying to make out which were the two sides of it; and, as it was perfectly round, she found this a very difficult question.[2]
>
> Carroll, *Alice's Adventures in Wonderland*

Lewis Carroll is a well-known figure in the Western literary tradition. His stories, written for children, quickly transcended the realm of children's literature. *Alice's Adventures in Wonderland* has been, since its publication in 1865, the object of numerous interpretations, subjected to a wide range of analyses and studies, not only in the realm of literature and semiotics, but also from philosophical, psychological, psychoanalytical, sociological and scientific points of view. The book presents itself with so many layers of meaning that, even though it has been searched inside and out, it remains vivid for whoever wants to venture into it. It speaks about our condition as humans and, for that reason, bears a kind of timelessness and crosses the barriers of cultural differences. The work has been translated into all major languages and most of us have come across *Alice*, at least once in our lives, if not through the book itself, then through some of the numerous cinematographic or theatrical interpretations it has generated. The work of Lewis Carroll is not easily circumscribed; created through nonsense and humour, it is resistant to a complete analysis or demystification and cannot be exhausted by any literary movement. It oscil-

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[1] In its original meaning in the French language, the word *exergue* is defined as *espace hors d'oeuvre*, which signifies a "space outside of a work" but also a kind of "appetizer-space." The word was later used to refer to the space ascribed for inscription on a medal, and became, by extension, the inscription itself: an epigraph. In the contemporary meaning of the word, an *exergue* is what presents, makes explicits or unfolds.

[2] Lewis Carroll, *Alice's Adventures in Wonderland*, in *The Annotated Alice*, with introduction and notes by Martin Gardner (London: Penguin Books, 1960) 73.

lates within the thin line that connects Romanticism and Surrealism, and separates art from science.[3]

My interest for the work of Lewis Carroll in relation to architecture was triggered mainly by a desire to explore the potential of the paradox to bring about space, to induce a temporal dimension in our encounter with space. In a text, there is a space that lies between the writer and the reader; it is there that meaning is hidden and sought. In a building, there is a cleft between the physical space and the spaces created through our perception. I will try to make explicit how the nonsensical element "functions" in Lewis Carroll's writing, and how it generates a paradoxical space.

Let us examine the paradox (para-*doxai*[4]) as it has been wondered at from a philosophical standpoint. One paradox—if not the most famous in the history of Western philosophy—can be revisited in the work of Zeno of Elea (around 490-485 BC), who is known to have been a student of Parmenides. The famous paradox of "Achilles" was formulated, as part of a series of arguments, in order to enrich the ideas of Zeno's master; it arose in the context of the opposition between Parmenides and Heraclitus.

For Parmenides, the *Being* which fills everything is *unique*, *immobile* and *immutable*, even though this idea may appear contradictory to our experience of the world, which seems to be in a constant stage of change. For him, knowledge is the result of our perception, through reason, of the immutability of the *One*: For Parmenides, thinking and being are identical and movement is an illusion.[5]

On the other hand, Heraclitus posits *becoming*—the constant flow of time and the perpetual flux of things—as the basic principle. He may be seen as developing the first instance of dialectical thinking: he states that everything

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[3] Octavio Paz expresses this idea of a romanticism that is not merely nostalgic of the past or a reactionary attitude against the industrial revolution and the scientific mind-set, but a romanticism that is trying to reconcile the *mythos* and the *logos*. According to Paz, such movements as Romanticism and Surrealism are *visions of the world* that can travel underground, through history, and reappear when they are least expected. Octavio Paz, *The Bow and the Lyre* (Austin: University of Texas Press 1973) chapter 8, especially 154-55.

[4] The Latin *doxai* can be translated into English as "opinion." In that sense, a paradox can be understood as being contrary to common sense or commonly accepted opinions, or at least as questioning the common sense.

[5] This is a very brief summary of Parmenides's ideas, intended solely to emphasise how they can be read in opposition to Heraclites's position. My explanation is based on the work of G. S. Kirk, J.E. Raven, M. Schofield, *The Presocratic Philosophers* (London: Cambridge University Press 1957, 1983) 250-253.

has to be conceived in relation to its contrary and that the *One* is, in itself, two-fold. For Heraclitus, movement is the reality of the world which is in perpetual flux, and immobility is only an appearance. The river-image illustrates that conception: "Upon those that step into the same rivers different and different waters flow ... They scatter and ... gather ... come together and flow away ... approach and depart."[6]

As opposed as the two schools may have been, both masters nevertheless addressed the same problem; they observed a hiatus between the realm of ideas and that of our sensory experience of the world. Zeno's aim was to illustrate that the hypothesis of movement, seen as a temporal change of "position," leads to a contradiction. Zeno is known to have formulated four paradoxes or arguments, all of which deal with the same question in slightly different ways. In two of these arguments, the idea of time is contradictory. The paradox of the "Arrow" goes as follows. If we posit a concept of time as a *succession of distinct instants*, and consider the movement of an arrow (from the moment it leaves the bow of the archer to its final position reaching the target), dividing this movement into an infinite series of positions, it is possible to infer that, in each of these positions—in each of these now's—the arrow is immobile. It follows that in the infinity of all its possible positions, the arrow does not move and shall never reach the target. On the other hand, if we posit time as an infinite *continuum*, the paradox of "Achilles" arises. An early recount of it can be found in Aristotle's *Physics*. "[T]he 'Achilles' ... amounts to this, that in a race the quickest runner can never overtake the slowest, since the pursuer must first reach the point whence the pursued started, so that the slower must always hold a lead"[7] Achilles, the fast and strong Greek warrior, shall never win the race against the tortoise, the slowest runner, because the tortoise was given an advantage and left before him. This is due to the fact that Achilles "has to reach the point from which the tortoise started, and then the point the tortoise had reached when he reached its starting point, and so on *ad infinitum*"[8] Consequently, even though the distance between the runners is gradually reduced, it never disappears. Zeno's main concern may have been to show the illusory aspect of movement, yet the series of paradoxes he formulated has had

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[6] Ibid., 195.

[7] Aristotle, *Physics*. Z9,239b14 in Kirk, Raven, and Schofield, *The Presocratic Philosophers*, 272.

[8] Ibid.

consequences in philosophy, from antiquity onwards; philosophers' attempts to resolve the problem of the infinite regression are innumerable.[9] From these paradoxes, we learn that time can be imagined simultaneously as a series of instants *and* an infinite continuum.

Lewis Carroll brought the paradox of Achilles and the Tortoise to another level, introducing its protagonists to the problem of language. In *What The Tortoise Said to Achilles*, the Greek warrior "had overtaken the Tortoise" (we all know that in "real" life, a strong and fast Greek warrior would catch up with a slow tortoise, even if the tortoise was given the advantage of leaving the starting line in advance) "and had seated himself comfortably on its back."[10] The two characters start a conversation:

> "So you've got to the end of our race-course?" said the Tortoise. "Even though it *does* consist of an infinite series of distances? I thought some wiseacre or other had proved that the thing couldn't be done?"
>
> "It *can* be done," said Achilles. "It has been done! *Solvitur ambulando*. You see the distances were constantly *diminishing*: and so—"
>
> "But if they had been constantly increasing?" the Tortoise interrupted. "How then?"[11]

The Tortoise proposes to tell Achilles the story of such a race-course, in which the distances would increase infinitely. Achilles is quite excited and offers to write down, in his notebook, the successive steps of the race. The conversation goes on:

> "That beautiful proposition of Euclid!" the Tortoise murmured dreamily. "You admire Euclid?"
>
> "Passionately! So far, at least, as one can admire a treatise that won't be published for some centuries to come!"
>
> "Well, now, let's take a little bit of the argument in that first proposition—just two steps, and the conclusion drawn from them. ... And, in order to refer to them conveniently, let's call them *A*, *B* and *Z*:
>
> (A) Things that are equal to the same are equal to each other.
>
> (B) The two sides of this Triangle are things that are equal to the same.

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[9] In *Avatars of the Tortoise*, Borges gives a list of those who have formulated explanations for the paradox, a list which goes as follows: "Descartes, Hobbes, Leibniz, Mill, Rouvier, Goerg Cantor, Gomprez, Russell, Bergson." See Jorge Luis Borges, "Avatars of the Tortoise," in *Labyrinths* (New York: New Directions Books 1962) 207.

[10] Lewis Carroll, "What The Tortoise Said to Achilles," in *The Complete Illustrated Lewis Carroll* (Ware, Hertfordshire: Wordsworth Editions 1996) 1104.

[11] Ibid, 1105

(Z) The two sides of this Triangle are equal to each other."[12]

Achilles accepts the logical sequence as valid. The race begins as the Tortoise puts the hero in a rather ackward position. The Tortoise accepts the premises *A* and *B*, yet denies that they automatically justify the conclusion. Achilles is obliged to interpolate a hypothetical proposition in order to convince the Tortoise of the logical validity of the conclusion. The intermediary preposition can be called *C*, and goes as follows:

(C) If *A* and *B* are valid, *Z* is valid.

Achilles writes it down in his book. Having made this brief clarification, the Tortoise accepts the validity of *A*, *B* and *C*, but not of *Z*. Achilles, indignant, interpolates:

(D) If *A*, *B* and *C* are valid, *Z* is valid.

And then, not with a certain resignation:

(E) If *A*, *B*, *C*, and *D* are valid, *Z* is valid.

In Lewis Carroll's version of the paradox, the distances do not diminish, they grow.[13] The Tortoise insists: " 'Until I've granted *that* [referring to proposition (E)], of course, I needn't grant *Z*. So it's quite a *necessary* step, you see?' 'I see,' said Achilles; and there was a touch of sadness in his tone.' "[14] A few months later the narrator of the story goes back to recount the race. At that point Achilles is writing down another line. In his note-book, there are one thousand and one of these intermediary propositions.

When Lewis Carroll revisits the paradox of Achilles and the Turtle, he does not express his ideas in a discursive manner; rather, he uses his prefered means

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[12] Ibid., 1106.

[13] I owe this passage to Borges's *Avatars of the Tortoise*. Borges points out that the infinite regression, *regressus in infinitum*, is perhaps applicable to all subject matters, revealing the intricate relationship between logic, words and philosophy. See Borges, "Avatars of the Tortoise," 206-7.

[14] Lewis Carroll, "What The Tortoise Said to Achilles," 1107.

of addressing philosophical notions: the dialogue form.[15] What we learn from the conversation between Achilles and the Tortoise is that such notions as time or movement, in order to be understood not only as abstract logical notions, but also as ideas, as philosophical concepts, are bound to words and to the relationship induced by words in our reasoning. As Bertrand Russell pointed out, the infinite argument around the hypothetical proposition has to be made concrete, using a word like "therefore," a word which implies a decision of the truth or falsehood of the premises involved in the syllogism.[16]

In that sense, not only does Lewis Carroll acknowledge the insolubility of Zeno's paradox, he stretches it further, illustrating the importance of language and the inevitable ambivalence that results from the problematic aspect of words. As Borges explains using William James's argument, "not only does the paradox of Zeno of Elea trigger the reality of space, but also that of time which is thinner and more vulnerable. I would add that it puts in a state of emergency the notion of existence within a physical body, the idea of permanent immutability, and the flow of a night in one's life."[17] Borges concludes, giving his personal opinion: "Zeno cannot be contradicted, unless we force ourselves to acknowledge space and time as *ideals*."[18] The paradox is an expression of "reality." It is an ambivalent yet evocative image of the real. As we shall see further on, with the transformation of the scientific mind-set in the modern era, the concept of time and consequently the notion of space have tended to be idealised and detached from the reality of experience. This idealisation reached a kind of paroxysm in the nineteenth century and, for that reason, Lewis Carroll's subtle position becomes even more fascinating.

Carroll's approach to the paradox of Zeno is insightful. He was reacting against Victorian society's pragmatism and questioning, in such a mode of thought, the possibility of accessing "absolute" truth through scientific method

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[15] As Ernest Coumet points out in his article "Lewis Carroll logicien," whether written under his pseudonym or published under his real name, Dodgson's work almost always takes the form of a dialogue. The first paragraph of *Alice's Adventures in Wonderland* opens with Alice's comment on the book that her sister is reading, a book which apparently does not contain any pictures or conversation: " 'and what is the use of a book', thought Alice, 'without pictures or conversations?' " see Ernest Coumet, "Lewis Carroll logicien," in Lewis Carroll, *Oeuvres* (Paris: Robert Laffont 1989) 2:761.

[16] Bertrand Russell, *The Principles of Mathematics* (London: Allen & Unwin 1937) 34.

[17] Jorge L. Borges, "La course perpetuelle d'Achille et de la tortue", in *Discussion* (Paris: *Oeuvres complètes*, Gallimard, Bibliothèque de la Pléiade, 1993) 247. My translation.

[18] Ibid., 248. The translation and italics are mine.

alone, regardless of the problematic aspect of language and the evocative power of poetry, reducing language to a system.[19] Is it not the case that any system, no matter how complex it may appear, always circumscribes a certain field or realm—a world—and that the rest is then left outside, rejected or not addressed? Does the beauty of a system not lie in its self-sufficiency? In our "modern" attitude there is a tendency to step outside a system in order to build, just beside it, another one that is antagonistic to the former; the union of those two systems then constitutes another system (two radically opposed systems are always tightly connected, like the two sides of the same coin). However, we learn from Lewis Carroll's approach that there may be a way to avoid delusion; it may be possible to enter a system, work within its limits (precisely at the limit) and create a new component (a critique) that induces a slight movement. Language is polysemic and in that sense, there is an ambiguity that cannot be resolved, but in the mind—in the imagination—all antagonistic systems can coexist. It is the attribute of poetry, of poetic language, to reveal these paradoxes.

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[19] C. S. Peirce (1839-1914), Lewis Carroll's contemporary, formulated the *First Principle of Pragmatism*: "One's concept of the effects of a thing are equivalent to one's concept of the thing itself." This maxim is the methodological basis of *Conceptual Analysis*. The eventual analysis of these concepts (intellectualised consequences of action) can be confronted with reality through experience (intellectual and practical experimentation); this reasoning is called *Abduction*. Peirce formulated the *triadic* relation of the sign to its object, where every concept of being is mediated through the intellectualisation of the interpreting consciousness. In the end, truth is what is accepted by a community of scientists after careful experiments and abductions. (*What I tell you three times is true.*) Throughout his work, Carroll tries to show the inherent circularity of such logic. See C. S. Peirce, *Collected Papers* vol. 5 (Cambridge: Harvard University Press 1934) 1, 90-93, 186.

Nonsense in movement on a *very* narrow wall

> The shop seemed to be full of all manner of curious things—but the oddest part of it was that, whenever she looked hard at any shelf, to make out exactly what it had on it, that particular shelf was always quite empty, though the others round it were crowded as full as they could hold.[20]
>
> Carroll, *Through the Looking Glass*

Through the reading of a work of fiction, the imagination is triggered and the mind is set free to travel in all possible directions. Lewis Carroll's fiction allows for such a movement to take place, through a specific means, nonsense, a realm in which he was a pioneer. His work represents, according to Gilles Deleuze, "the first great *mise-en-scène* of the paradoxes of sense."[21] Lewis Carroll's peculiar use of words reveals the paradoxical nature of meaning, the inescapable coexistence of antagonistic notions. His work follows a logic of nonsense that is expressed through different means and in the stories, the nonsensical element—or particle—varies. It may be a word that circulates and connects odd notions, an esoteric word which tells its own meaning and, for that reason, acquires a kind of neutrality. It can also be a *portmanteau*, a word created from the meanings of different words, as Humpty Dumpy explains to Alice in *Through the Looking Glass and What Alice Found There*: "'Well, "*slithy*" means "lithe and slimy". "Lithe" is the same as "active". You see, it's like a *portmanteau*—there are two meanings packed in one word.'"[22] In some of Carroll's texts, the whole structure of the tale follows a logic of nonsense: two stories move in different rhythms on each side of an odd borderline.[23] In Wonderland, it seems that the nonsensical element is conveyed through Alice's changes of positions or movements in space, movements which are connected, as I shall emphasise later, with notions like scale and duration. Time and movement are put in relation to a space that is unstable and whose boundaries are

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[20] Lewis Carroll, *Through the Looking Glass and What Alice Found There*, in *The Annotated Alice*, with introduction and notes by Martin Gardner (London: Penguin Books, 1960) 253.

[21] Gilles Deleuze, *The logic of sense*, trans. Mark Lester, Charles Stivale (New York: Columbia University Press 1990), xiii.

[22] Carroll, Through the Looking Glass, 271.

[23] On these literary processes, see Gilles Deleuze, *The Logic of Sense*.

mobile.

In *Through the Looking Glass...*, Humpty Dumpty is sitting on a very high, narrow wall. It is indeed a precarious situation that nonetheless allows him to claim a kind of mastery over words.

> "When *I* use a word," Humpty Dumpty said in rather a scornful tone, "it means just what *I* choose it to mean—neither more nor less."
>
> "The question is", said Alice, "whether you *can* make words mean so many different things."
>
> "The question is", said Humpty Dumpty, "which is to be master—that's all." ..."They've a temper, some of them—particularly verbs, they're the proudest—adjectives you can do anything with, but not verbs—however, *I* can manage the whole of them! Impenetrability! That's what *I* say!"[24]

Unlike Humpty Dumpty, we shall never completely restrain the words' plurality of meaning; the words will always evoke much more than what we want them to say—or much less. Like Alice, we are bound to remain at the level of the ground, facing the wall, unable to get this overview and control upon words that Humpty Dumpty's position allows for, unless we force our imagination and venture to play. Something happens through play on words, once we acknowledge their peculiar behaviour. Nonsense expresses the possible coexistence of opposites but also reveals their opposition, and therefore, presents a dichotomy. Nonsense, approached in such terms, could be said to be the linguistic expression of our paradoxical encounter with the world. Consequently, nonsense should not be understood as an absence of meaning, but rather as a surplus of *sens*, a combination of opposite directions (*sens*) and meanings (*sens*) that coexist.[25] Between these opposites, there is necessarily a limit—a point, a plane, a body; a certain Humpty Dumpty sitting on a *very* narrow wall— that separates both. It is *in between* and therefore cannot be fixed; it moves, it transforms itself, or else it appears to be fixed, but only for a certain *time*, because the mind always oscillates between the two sides.

In this sense, the paradox creates a space: the limit that separates the two sides of the opposition is set in motion through nonsense; it circulates, like an empty box or an inaccessible item, like the constantly escaping point that the

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[24] Carroll, *Through the Looking Glass*, 269.

[25] The word "sens," in French, signifies sense, meaning and direction at the same time. The way we encounter the world through sensory experiences is what "creates" meaning. And the idea of orientation or direction implied in the word "sens" renders manifest the mobile nature of meaning, the fact that it is situated *in between* and constitutes an *event*.

arrow follows, like the infinity of positions between Achilles and the Tortoise. The movement happens in both directions simultaneously, the limit becomes thick, the line that the nonsensical particle follows becomes a circle, a cycle. The interstitial space is always becoming, it is the site of *events*. It is a pure becoming that can never be achieved because it would then be. Plato emphasises this dualism between *being* and *becoming* when he writes, in the *Parmenides* "... the younger becoming older than the older, the older becoming younger than the younger—but they can never finally become so; if they did they would no longer be becoming, but would be so."[26] In the end, becoming implies *status quo*—it speaks of immobility—because the transformation occurs in both directions concurrently.

There is an immense distance, yet a wonderful proximity, between the realm of *ideas* and our perception of the world. There is a land in between that Plato would call "space." This space does not exist, it becomes—or alternatively, it allows things to happen. It is between the words and the things, yet it is what constitutes both. In essence? In fact? It is hidden inside the things *and* at the surface of things. Through language—through speech—this *entre-deux* is uttered at a certain moment and becomes *real*. As we shall see, geometry somehow participates in this utterance; it evinces a common desire to reveal, to order, that is to say, to access a deeper understanding of things.

If the task of metaphysics is precisely to try and express the unutterable, to put into words these hints at what is ungraspable, ideas may be revisited, expressed in different ways, approached from different angles, but the reality they attempt to describe, or reveal, ultimately remains concealed. In a sense, it is the play that matters. And perhaps concealment is countered in a more powerful way through oblique means of communication or through our encounter with works of art. In his book *Metaphysical Horror*, Leszek Kolakowski explains how myths have a peculiar status that is not exactly "theory" because the reality they refer to is *ultimate*; because the content of the mythological "story" is precisely speaking about the unspeakable. He writes:

> It is plausible to think that various aspects of the ultimate reality are best expressed in religious worships and art—though not in the sense of a painter depicting the Absolute on the canvas or a priest explaining it in theoretically satisfactory categories. It is rather that what is nameless and not depictable may be hinted at—at least in intense religious

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[26] Plato, *Parmenides*, 154-155, trans. F. M. Cornforth, in E. Hamilton and H. Cairns, eds. *Plato: The Collected Dialogues* (New York: Bollingen Foundation 1961) 946.

> and artistic acts—in such a manner that the hint conveys a feeling of understanding, a kind of momentary satisfaction which both is valid in cognitive terms and provides a certainty of being 'in touch with' or 'within' that which is more real than daily life reality. The satisfaction is bound to be momentary; it could assert itself as a permanent achievement only if its message were convertible into theoretical concepts which it is not by its very nature.[27]

Even though we can come to agree that Absolute truth is beyond our reach, we nonetheless aim towards it—this is also a human inclination. Even though we stand upright and conceive of our posture in relation to the world as somehow vertical, there is always a slight angle that generates an oscillating movement, towards truth and again away from it. Body and mind perceive the world from an almost imperceptible angle, only a few degrees away from the right angle. There is no such thing as a perfectly right angle in the realm of human experiences and thoughts. This angle keeps Absolute truth away from our reach while giving us the inclination to pursue the search.

It seems that Lewis Carroll's writing also places him in a *funambulesque*[28] position, a position similar to Humpty Dumpty sitting on his wall (see fig. 2). In order to reflect upon the impossibility of getting to a complete, objective understanding of things, the impossibility of bridging the gap between ideas and the world that these ideas wish to "resemble"—that is to say, in order to criticise the systematic approaches of pragmatism—Lewis Carroll creates, within the limits of language, a new language, bringing nonsense to an unprecedented level. He uses the subtleties of language and therefore manages to "save" his argument. His work tells us that it is possible to deal with profound human questions, to revisit the tradition of Western philosophy, in a way that remains tied to our reality, that is to say, without enclosing ourselves into immutable systems.

Language and geometry may be more than systems, and there may be a link, however oblique and tenuous, between art and science that coincides with the land of geometry. Working within the limits of language, Lewis Carroll creates a new language in order to express lingering questions of humanity. They sound and appear completely new, even new-born. Language ceases to be a fixed system but is conceived as growing continuously into something else: a

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[27] Lescek Kolakowski, *Methaphysical Horror* (Oxford, and New York: Basil Blackwell 1988) 88-89.

[28] *Related to tightrope walking*. The narrowness of Humpty Dumpty's wall implies the notions of equilibrium and movement.

language that is alive. Words enter in a dance, they play, and sometimes they eat each other: *Snark!*

Humpty Dumpty's wall may be extremely narrow, it is nonetheless on its edge that meaning appears to be "in control", but this appearance remains temporary and Humpty Dumpty's oscillating manners—trying to keep his balance—testify to the fragility of such an appearance. Meaning is unstable and undeniably escapes us once we enter into a dialogue and try to express ideas—to communicate. It soon falls back to its plural nature and opens onto interpretations. In a sense, this is Humpty Dumpty's tragic end.

'Humpty Dumpty sat on a wall:
Humpty Dumpty had a great fall.
All the king's horses and all the
King's men
Couldn't put Humpty Dumpty in his
place again.'[29]

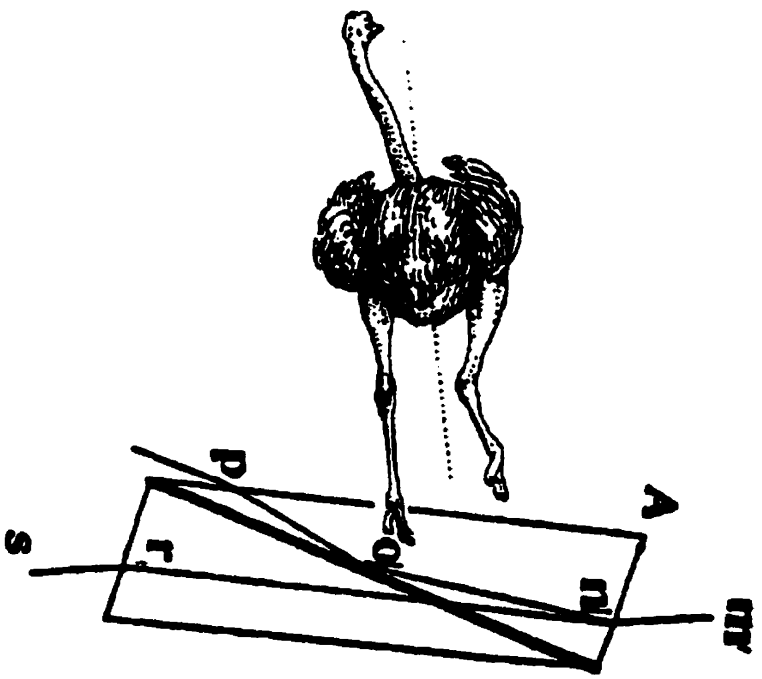

Fig. 2
Geometrical behaviour: the dancing ostrich, from "Lewis Carroll logicien," postface by Ernest Coumet to "Logique sans peine," Lewis Carroll, Oeuvres (Paris: Robert Laffont 1989).

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[29] Carroll, *Through the Looking Glass*, 262.

The Land of Geometry

> "While you're refreshing yourself," said the Queen, "I'll just take the measurements." And she took a ribbon out of her pocket, marked in inches, and began measuring the ground, and sticking little pegs in here and there.
>
> "At the end of two yards," she said, putting in a peg to mark the distance, "I shall give you your directions."[30]
>
> Carroll, *Through the Looking Glass*

The paradox brings about, to borrow Borges's expression, 'tenuous labyrinths of time.' Opposite notions coincide in fragments of time which engender an oscillating movement. Such coincidences take place in an interstitial space which is perhaps the same space—the space between the realm of ideas and the world of experience—that Plato is referring to as *chora*. According to Plato, it is through geometry—through a geometrical way of thinking—that the philosopher is enabled to bridge the gap between the two realms, to reveal the order of things in relation to the order of the cosmos. In Plato's *Georgias*, Socrates emphasises the importance of geometry, he tells Callicles:

> ... that heaven and earth and gods and men are held together by communion [koinonia] and friendship [philia], by orderliness [cosmiotes], temperance [sophrosyne], and justice [dikaiotes]. ... Now you, as it seems to me, do not give the proper attention to this, for all you cleverness, but have failed to observe the great power of geometrical equality amongst both gods and men: you hold that self-advantage is what one ought to practice, because you neglect geometry.[31]

Geometry occupies a central position in the development of Western philosophy, both in the way geometry tends to be related to the expression of ideas—its inextricability from language—and in the way we construct meaning and

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[30] Ibid., 211.

[31] Plato, *Georgias*, 508a, transl. W. R. M. Lanb (Cambridge, Mass., and London: Loeb Classical Library, 1939).

understand theses ideas, somehow, in geometrical terms.[32] Virtually, we tend to organise fragments of thoughts, to give a shape to an idea or to "build" a structure around it. We make our point, we follow a line (of thought) and, eventually, get caught into a circular argument. In this process, the participation of the geometrical and mathematical realms is implicit. Numbers and geometric figures were understood, from the time of the early Greek philosophers until the nineteenth century, as mediators between the world of man and higher instances: they constituted a way to access knowledge. This strange interference of both the geometrical and the mathematical realms in human thinking led the most ancient philosophers to believe that man's soul could be a number moving itself (see fig. 3).[33]

"Geometry is the Science of Measuring the Land." In his *Mathematical Praeface to the Books of Euclid*, published in 1570, John Dee gives us a definition of this *Arte Mathematical*. What is the nature of the *land* that geometry measures? Dee refers to remote times and places, and to the wars and injustices that took place when man started to measure and divide the earthly ground, creating frontiers and naming pieces of land that became his property or the property of a nation; "Till, by Gods mercy, and mans Industry, The perfect Science of Lines, Plaines, and Solides (like a divine Justicer) gave unto every man, his owne [land]."[34] John Dee's definitions of both the mathematical and geometric entities reveal the paradoxical interval occupied by Euclidean geometry.

> For, these beyng (in a manner) middle, betwene thinges supernaturall and naturall: are not so absolute and excellent, as thinges supernatural: nor yet so base and grosse as things natural: But are thinges immateriall: and neverthelesse, by materiall things able somewhat to be signified. And though their particular Images, by Art, are aggregable and divisible: yet the generall *Formes*, notwithstandyng, are constant, unchangeable, untrãsformable and incorruptible. Neither of the sense, can they, at any tyme, be perceived or judged. Nor yet, for all that, in

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[32] Michel Serres, *Les origines de la géométrie* (Paris: Flammarion 1993). According to Serres, geometry remains outside cultural differences and dogmas and, in the same way, outside of singular scientific moments. In that sense, geometry is common to humanity. But the *logos* it measures remains mysterious and, somehow, original to all origins.

[33] John Dee, *The Mathematical Praeface to the Elements of Euclid (of Megara)* (London: John Day 1570) 4. In this passage, Dee expresses the primordial status of mathematics and geometry in human affairs, he refers to the most ancient philosophers, but unfortunately does not give more precise information on the identity of these thinkers.

[34] Dee, *The Mathematical Praeface*,14.

> the royall mynde of man, first conceived. ... A merveylous newtralitie have these thinges Mathematicall and also a strãge participatiõ betwene thinges supernaturall, immortall, intellectual, simple, and indivisible: and thynges naturall, mortall, sensible, compounded and divisible.[35]

The three realms of "things" are different and remain distant, even though they constantly interact. Nonetheless, the position of the geometrical entities is one of neutrality. It is precisely in this "in-between" land constituted by geometry that every man can access the *idea* of infinity.

> All Magnitude, is either a Line, a Plaine or a Solid. Which Line, Plaine or Solid, of no Sense, can be perceived, nor exactly by hãd (any way) represented: nor of Nature produced: But, as (by degrees) Number did come to our perceiverance: So, by visible formes, we are holpen [helped] to imagine, what our Line Mathematical, is. What our point, is. So precise, are our Magnitudes, that one Line is no broader than an other: for they have no bredth: Nor our Plaines have any thicknes. Nor yet our Bodies, any weight: be they never so large of dimensiõ. Our Bodyes, we can have Smaller, than either Arte or Nature can produce any: and Greater also, than all the world can comprehend.[36]

If geometry does not measure the real earth—the earth that we experience in our embodied experience—and if geometry does not constitute an idea—being greater and smaller than all possible thoughts—that is to say, if geometry measures a land of its own which lies in-between these two realms, its origin then becomes problematic. Was geometry created by humans or was it rather given,

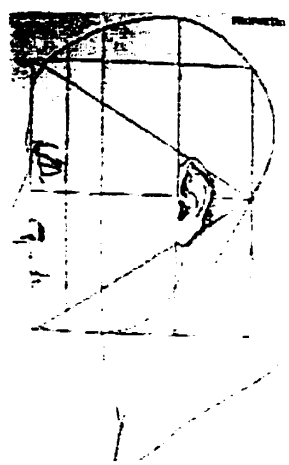

Fig. 3
Illustration of the geometrical proportions of the head, from Luca Pacioli, "Divina Proportio".
Although the drawing is meant to reveal the divine proportions of the human figure, one could read, in this image, an analogy to the geometrical "behaviour" of the human mind.

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35 Ibid., 2.

36 Ibid., 13.

and for that reason, is geometry "making" us what we are?

Until the nineteenth century, the Euclidean principles, regardless of how paradoxical they may appear to the modern reader, had not yet needed to be proven. The definitions of the point and the line, for example, were "given." The theorems were deduced from the essence of the geometrical entities; they constituted unquestionable *truths*. The most radical transformation in the understanding of the Euclidean principles occurred in the nineteenth century: Euclid's axiom about the parallelism of lines was questioned. What if parallel lines did meet somewhere further than the farthest imaginable distance—somewhere at infinity?

In our tactile experience, in which hands follow the edges of a table, parallel lines *do not* meet. For the eyes, looking toward the horizon, they *do* appear to meet. For the painter, willing to create an image that would convey a sense of the real, they *do* meet on the canvas. For Euclid, in the *entre-deux* occupied by geometry, parallel lines are parallel. They remain geometrical entities and therefore, they *do not* meet. "But who would need parallel lines to meet?" wrote Dodgson in *Euclid and His Modern Rivals*. For the nineteenth-century new-geometricians, they meet somewhere at infinity, and because infinity has become part of the world, as I shall explain further on, they meet somewhere in the thickness of the trace left by the pen, or at the south pole.

Euclid and His Modern Rivals was published in 1879, under Carroll's real name, Charles L. Dodgson. Dodgson devoted most of his life to the work of Euclid, he was a don and lecturer at Christ Church College, in Oxford, where he taught mathematics for over twenty-five years. Concurrently, he wrote and published numerous pamphlets and articles criticizing—always in a witty, humoristic manner—all sorts of matters that appeared problematic to him, in the context of his life at Oxford. *Euclid and His Modern Rivals* "... is presented in dramatic form..." Dodgson explains, "...partly because it seemed a better way of exhibiting in alternation the arguments on the two sides of the question." The question he addressed in this literary "experiment"—writing about scientific matters in a somehow humoristic way—was clearly expressed in the prologue to the *drama*:

> "The object of this little book is to furnish evidence, first, that it is essential, for the purpose of teaching or examining in elementary Geometry, to employ one text-book only; secondly, that there are strong a priori reasons for retaining, in all its main features, and *specially in its treatment of parallels*, the Manual of Euclid; and thirdly,

> that no sufficient reasons have yet been shown for abandoning it in favour of any of the modern Manuals which have been offered as substitutes.[37]

Dodgson expands on the literary form that he adopted; he writes:

> I have permitted a glimpse at the comic side of things only at fitting seasons. ... Pitying friends have warned me of the fate upon which I am rushing: they have predicted that, in thus abandoning the dignity of a scientific writer, I shall alienate the sympathies of all true scientific readers, who will regard the book as a mere *jeux d'esprit*, and will not trouble themselves to look for any serious argument in it. ... In furtherance of the great cause which I have at heart—the vindication of Euclid's masterpiece—I am content to run some risk; thinking it far better that the purchaser of this little book should *read* it, though it be with a smile, than that, with the deepest conviction of its seriousness of purpose, he should leave it unopened on the shelf.[38]

The drama takes place at midnight, in a College study. "'Minos' (a University examiner who has been commissioned by the ghost of Euclid to criticize the works of his Modern Rivals), and Herr Niemand (a ghostly German Professor who appears as counsel for the authors criticized)"[39] carefully go through thirteen manuals meant to replace Euclid's *Elements* for the purpose of teaching elementary Geometry. The authors criticized are, "namely, Legendre—the American writers, Chauvenet, Loomis, and Pierce—the English Writers, Cooley, Cuthbertson, Morell, Reynolds, Willock, Wilson, and Wright—and the Syllabus put forth by 'The Association for the Improvement of Geometrical Teaching,' together with Wilson's book founded on the Syllabus."[40] In 1885, Dodgson published a *Supplement to "Euclid and his Modern Rivals"*, in which another modern rival, M. Henrici, goes through the same critique. In the last 'act' of *Euclid and His Modern Rivals*, the phantom of Euclid reappears. As at the beginning of each act, Dodgson gives a little introduction.

> *Scene as before. Time, the early dawn.* Minos *slumbering uneasily,*

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[37] Charles L.Dodgson, *Euclid and His Modern Rivals*, (London: Macmillan & Co.) preface. Italics mine.

[38] Ibid.

[39] Charles L. Dodgson, *Supplement to "Euclid and his Modern Rivals"*(London: Macmillan and Co. 1885), preface. "Herr Niemand" is the German equivalent of "Mr. Nobody".

[40] Ibid., preface.

> *having fallen forwards upon the table, his forehead resting on the ink-stand. To him enter* Euclid *on tip-toe, followed by the phantasms of* Archimedes, Pythagoras, Aristotle, Plato, &c., *who have come to see fair play.*[41]

We can wonder who these other philosophers, implicit in the term *et cetera*, may be for Dodgson. In fact, perhaps the whole of Western philosophy is included in the term. In a sense, we can infer that for Dodgson, every philosophical moment is concerned with Euclidean geometry and shall not neglect it in favor of other geometries, even though these "new" geometries remain fascinating ways of looking at the world in order to generate thought. He insists on the fact that the non-Euclidean geometries shall not replace Euclid's principles, especially in the matter of introducing young students to the geometrical realm. "Euclid's last words" are as follows:

> Let me carry the hope that I have convinced you of the importance, if not the necessity, of retaining my order and numbering, and my method of treating straight Lines, angles, right angles, and (most especially) Parallels. Leave me these untouched, and I shall look on with great contentment while other changes are made—while alternative proofs are appended to mine—and while new problems and theorems are interpolated. In all these matters my Manual is capable of almost unlimited improvement.[42]

This is very insightful regarding Dodgson's position. It seems clear that for him, the teaching of Euclidean geometry bears more implications than being solely knowledge that can be applied rapidly and with efficiency by the students. We can understand, both from the form of the book and its content, that Euclid's principles are concerned with something else than mere ways of finding the most "efficient" proof for a given problem. In the Euclidean text, the logical links between a series of elements, theorems and axioms then constitute rather a kind of *knowledge about knowledge*. This knowledge concerns a mode of thought and how ideas are connected to our perception of the world. Consequently, Dodgson's reaction is not against non-Euclidean geometries as other ways of philosophising; rather, his critique is directed towards a flattening of Euclid's work, a reduction of its implications. Dodgson's critique touch-

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[41] Dodgson, *Euclid and His Modern Rivals*, 183.

[42] Ibid., 199.

es upon something that was inevitably bound to happen. Eventually, Euclidean geometry became a minor geometry within the realm of all possible geometries. As Gaston Bachelard writes in *The New Scientific Spirit*:

> [Modern] science is like a half-renovated city, wherein the new (the non-Euclidean, say) stands side by side with the old (the Euclidean). ... Non-Euclidean geometry was not invented in order to contradict Euclidean geometry. It is more in the nature of an adjunct, which makes possible an extension of the idea of geometry to its logical conclusion, subsuming Euclidean and non-Euclidean alike in an overarching "pan-geometry".[43]

Euclidean geometry, which was gradually transformed by the development of infinitesimal calculus in the seventeenth and eighteenth century[44], was ultimately obliterated by the new geometries that developed and began to be "applied" in Dodgson's time. The scientific milieu of the nineteenth century did not reject Euclidean geometry. Rather, it was integrated and became a particular instrument, one of many, within a broader and more generalised geometry that claimed to explain every phenomenon. Euclidean principles have also tended to be misconceived. Today, they are understood as stiff, instrumental and systematised explanations of reality, while non-Euclidean geometries are seen as new formal realms that describe reality and the universe more accurately. This misunderstanding may be attributed to the fact that science has acquired an autonomous status and is no longer explicitly connected to the realm of ideas, or to the reality of lived, embodied experience. Bachelard discusses the consequences of this newly acquired autonomy. He draws our

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[43] First published in French in 1934, Gaston Bachelard's book *The New Scientific Spirit* is a problematic work. Bachelard's position in favor of the new scientific tongues, which he sees as bringing light to the limitations of the ancient scientific knowledge, can be qualified, as Jean Hippolite pointed out, as "romanticism of the intellect." Bachelard expresses, in this early work, a belief in the new sciences as bearers of a great potential for the "progress" of the human philosophical endeavour. In his later works, as for example in *The Poetics of Space*, Bachelard's position becomes more critical, as he addresses the importance of poetic imagination in the human encounter with the world. Nevertheless, *The New Scientific Spirit* constitutes a survey of the successive changes undergone by the scientific mind-set since the beginning of modernity, a survey which appears to me to be quite accurate and thought provoking. See Gaston Bachelard, *The New Scientific Spirit*, trans. A. Goldhammer (Boston:Beacon Press 1984) 8.

[44] Even though infinitesimal calculus was important for the development of non-Euclidean geometries, it remained, until the end of the eighteen century, at the level of ideas. The link between infinitesimal calculus and metaphysical notions is explicit in the work of Leibniz. We perceive a kind of transposition, in his work, of the paradoxical notion of time (both linear and cyclical) to a more general notion of space, or, to be more precise, of our *perception* of space. His work also evinces how ideas create images in the mind: it illustrates how geometry participates

attention to the self-creative power of modern science.

> Wonderworking reason designs its own miracles. Science conjures up a world, by means not of magic immanent in reality but of rational impulses immanent in mind. The first achievement of the scientific spirit was to create reason in the image of the world; modern science has moved on to the project of constructing a world in the image of reason. Scientific work makes rational entities real, in the full sense of the word.[45]

This echoes Nietzsche's idea that the world has become a fable, that we have not only destroyed the real world, but that through this destruction, the world of appearances was also abolished.[46]

But prior to the destruction of the world and its consequent transformation into an imaginary entity was the split between the world as "reality" and the world as "appearance." With Descartes (or is it rather with the Cartesian reading of the world?), modern man found a new state of existence as a thinking being and was allowed to step outside of the materiality of the world in order to observe, reason upon and eventually understand the order of things, from a distant point of view. Body and mind were separated in a drastic way, the body was caught in the homogenous space—the space of the *res extensa*—while the mind of the thinking subject could travel outside of this space, freed from cosmological fears and limitations. In the Cartesian view, the mind became a geometrical point—an immobile point—from which the subject was enabled to access the objective mathematical truths in the world. In that sense, the scientific mind-set that characterises "modernity" can be qualified, as Bachelard pointed out, as being metaphysically inductive.[47] From a logic that previously functioned in a deductive manner, the scientific spirit gradually transformed, and both reality and ideas were approached in different terms, using the inductive process which starts from a hypothetical assertion, an assertion that needs to find proof.

There seems to be an unsolvable paradox in the modern spirit. The real world was transformed into an ideal version of itself but this idealisation was

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in our understanding of complex notions. See Leibniz, *Monadology*, in *G.W.Leibniz: Philosophical Essays*, ed. and trans. Roger Ariew and Daniel Garber (Indianapolis, and Cambridge: Hackett Publishing Co. 1989) 213-225.

[45] Bachelard, *The New Scientific Spirit*, 13.

[46] see Friedrich Nietzsche, *Twilight of the Idols*, trans. R. J. Hollingdale (Harmondsworth: Penguin, 1968).

[47] Bachelard, *The New Scientific Spirit*, 6.

subsequently used to create a new reality, a new world which became the real one. As Nietzsche wrote, "It is not the victory of science that distinguishes our nineteenth century, but the victory of scientific method over science."[48] There was a shift in what constitutes the purpose of science: from being the expression of a vision of the world—a philosophy—it gradually transformed into a power to decipher, that is to say, a method of accessing the truth of the world.

In the nineteenth century, the implicit link between science and philosophy (their common rhetorical search for meaning) was stretched to the limit of its elasticity. The language of science, the abstract language of mathematics, acquired a higher status of truth than the "vulgar" language of spoken or written forms of communication. In the mind of the scientists, the mathematical formulas became accurate "models" of reality: the whole of creation could be described in algebraic terms.[49]

> The corner stone of the whole edifice [the scientific synthesis of all geometries], then, is the algebraic form. Put simply, algebra contains all relations and nothing but relations. The "equivalence" of different geometries is defined in terms of relations, and it is as relations that geometries have reality, not by reference to any object, experience, or intuition.[50]

This new abstract language was meant to resolve the distance between the words of discursive language and what they describe. Nineteenth-century scientists in newly specialised and autonomous disciplines participated with great enthusiasm in the scientific endeavour; for them, science appeared as the only possible way to find the "true" nature of things. The scientific quest became a means to achieve a complete and perfect understanding of God's creation, which was there for human beings to decipher and , eventually, transform. The archaic meaning of the word "truth" implies an ethical dimension: *to be true* in one's action, character or utterance, to be sincere.[51] On the other hand, the modern scientific mind is concerned more with whether a statement is true or false, even though the question that the statement is meant to answer was cre-

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[48]Friedrich Nietzsche, *The Will to Power*, trans. Walter Kaufmann and R.J. Hollingdale (New York: Random House, 1967), 261, No. 466.

[49] Algebra is an absolute language and its signs no longer refer to reality. It is an abstract language in which numbers do not have symbolic values. Even infinity (∞) becomes a number for the mere purpose of solving mathematical problems.

[50] Bachelard, *The New Scientific Spirit*, 29.

[51] Merriam-Webster's Collegiate Dictionary, (Tenth Ed. 1993) 1269.

ated by the scientists themselves and may not bear any relation whatsoever with the reality of the world of human experiences. Hypotheses must find proofs. Observed effects must have corresponding causes. In that sense, the scientific endeavour becomes, in itself, an infinite project.

As the concept of knowledge acquired an unlimited quality, the world was also extended to infinity, and once infinity became part of the world—once the realm of geometry lost its position of neutrality—the geometrician sought to describe not only the simple "ideal" figures of Euclidean geometry, but all possible figures in the conic sections between these ideals. In *Architecture and the Crisis of Modern Science*, Alberto Pérez-Gómez emphasises that already in the seventeenth century, and more especially with Girard Desargues (1593-1662), "the *continuity* that existed between the descriptive characteristics of geometrical figures and bodies" was recognized. Desargues "was the first to discover that the conic sections (parabola, hyperbola, and ellipse) were only perspective projections of a circle."[52] Yet, until the nineteenth century, these "discoveries" remained more or less at the level of theory—of ideas and human knowledge. The context of the Industrial Revolution and positivism was necessary in order for such geometrical concepts to find their way into practical applications which could then affect directly the world that we inhabit.

Indeed, in the nineteenth century, the "scientific utopia" that had begun to take shape as the modern scientific spirit developed became reality. The man of the Industrial Revolution, this man of science, ventured into unknown territory, leaving behind all points of reference from the past, that is, leaving behind the reality of embodied experience and the theoretical knowledge deduced from it. The episode of the "Map of the Ocean" in Lewis Carroll's famous poem, *The Hunting of the Snark*, is quite telling in this regard:

> He had bought a large map representing the sea,
> Without the least vestige of land:
> And the crew were much pleased when they found it to be
> A map they could all understand.

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[52] "In the context of Euclidean geometry, such continuity was never recognised. For each qualitatively different figure, there was a corresponding interpretation and deduction; each geometrical problem was solved according to its specific character." Even though Desargues's work was rejected in the context of the seventeenth century philosophical and scientific discussion, "it reveals the full and immediate impact of the epistemological revolution, opening the way to an effective technological domination of reality." See Alberto Pérez-Gómez, *Architecture and the Crisis of Modern Science* (Cambridge, Mass., and London: MIT Press 1994) 99-103.

"What's the good of Mercator's North Poles and Equators,
Tropics, Zones, and Meridian Lines?"
So the Bellman would cry: and the crew would reply,
"They are merely conventional signs!"

"Other maps are such shapes, with their islands and capes!
But we've got our brave Captain to thank"
(So the crew would protest) "that he bought us the best—
A perfect and absolute blank!"(see fig. 3)[53]

The scientific endeavour became frightening once its abstract concepts were equated to, or supplanted, lived experience. The *real* that we know through mathematical models is an approximation of reality, but it claims to be more real than experience itself. In *Sylvie and Bruno*, Carroll's intricate novel, a certain German professor entertains the children with a map of his town on which *everything* was marked down. The map measured one mile on each side, and reading it was quite problematic because the map, when totally open, would cast a shadow over the farmers' crops. It was then decided that the land itself would serve as a map: indeed an ingenious idea. Carroll shows that the "image" or the model has thus acquired a value equivalent to the reality it was intended to evoke. And such models shortly found their way into practical applications. The industrial revolution was a theatre of technological innovation in which machines were developed at a disorienting pace: utensils that would simplify the lives of men. "Inventions" were no longer seen as products of the imagination and of the intellect, that is, as ideas, but had to be made concrete—to be built—in order to acquiere a value. As this new status of technology reached architecture, buildings also became utensils.

Even though the abstract language of science claims universality, especially when it is used for the purpose of technological processes, scientists are nonetheless bound to words once they intend to communicate the uncovered "truths" to a broader audience. Yet, these truths have gained a higher value, gradually taking over those accessible through the language of poetry. Myths and poetry—story-telling through works of art—are no longer understood as the primary means of rendering the world habitable. But, as Borges explains,

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[53] Lewis Carroll, *The Hunting of The Snark*, in *The Complete Illustrated Lewis Carroll* (Ware, Hertfordshire: Wordsworth 1996) 683.

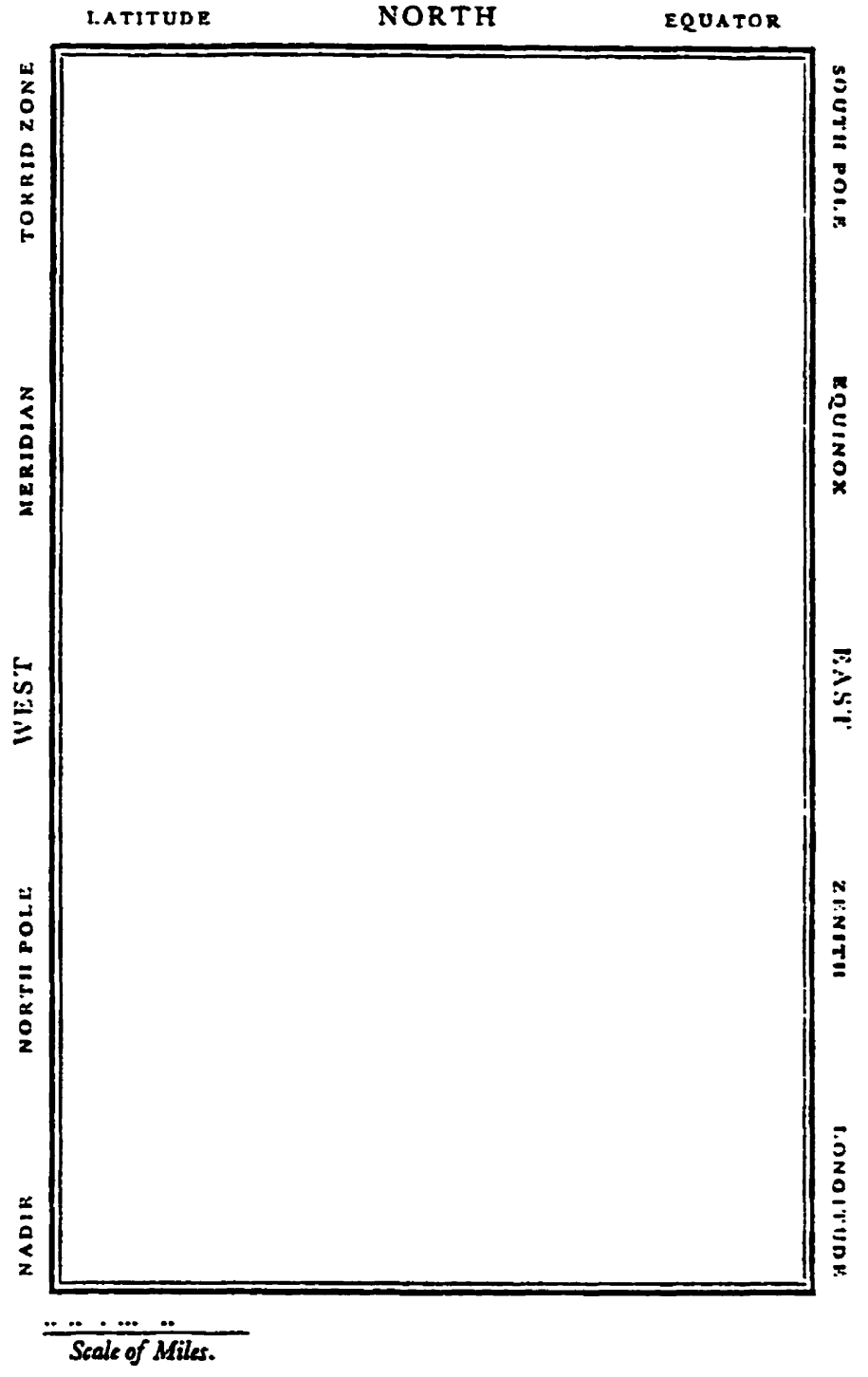

Fig. 4
"Ocean Chart", from Lewis Carroll, *The Hunting of the Snark, an Agony in Eight Fits* (London: Macmillan co. 1876)

> There is no basic [essentielle] dissimilarity between the metaphor and what scientists call the explanation of a phenomenon. They both constitute a link established between distinct things. ... Hence, when a geometrician asserts that the moon is a quantity that develops in three dimensions, his means of expression is no less metaphorical than Nietzsche's, who prefers to define the same moon as being a cat walking on top of the roofs. [54]

If we follow Borges's argument, the scientific truths are equally deceptive and, like myths and poetry, remain temporary and fragile; they are continuously shaken by the new "problems" that appear to the scientist.

From a chosen angle, from a certain point of view, either parallel lines meet or they don't, but the mind, the imagination, is able to travel *very* fast, encompassing all imaginable points of view. Paul Valéry wrote, "And is not the true the natural *frontier* of the intelligence?"[55] In the work of poets, two opposite situations can coexist at this frontier and "touch" each other. Might it be the task of the artist to reveal such paradoxes, allowing us to seize their evocative beauty? The word "task" suggests an ethical dimension that remains outside the "good or bad" dichotomy. For poetic language to escape from methodological application, it must speak about something common, about what makes us humans. Poetry does not follow a linear path, but one that is discontinuous and fragmented. Poetry is not limited to literature and art. Even modern technology has this potential for poetic expression, rather than being strictly a burden.[56] In *The End of Modernity*, Gianni Vattimo writes:

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[54] Jorge Luis Borges, "La métaphore" in *Autour de l'ultraïsme*, Articles non receuillis (Paris: Oeuvres complètes, Bibliothèque de la Pléiade, Gallimard 1993) 843-44. My translation.

[55] Paul Valéry, "Dialogue of the Tree", *Collected Works* Vol. 4 (New York: Pantheon Books 1956) 168. In this sentence, intelligence should not be understood strictly as the intellectual capacity, but rather as the possibility to distinguish, to perceive, to understand. In that sense, what is true is always what separates opposites and cannot be found on either of the sides; it lies in the acknowledgement of the difference.

[56] It is not surprising that contemporary scientists interested in quantum physics might see Lewis Carroll as a precursor. Physicists are now acknowledging the inevitable temporality of phenomena. The notion of time becomes essential once their aim is to describe not only an instant (a picture or a model of reality), but to comprehend a phenomenon (which cannot be described with the same equation in two temporal directions). Poetic language, the language of metaphors, is needed to describe the qualitative aspects of the successive transformations of matter. These physicists are trying to describe phenomena which are not very large or infinitesimally small, but phenomena that occur in between, in the world of everyday life. These phenomena cannot be idealised; their appearance and tangibility are unavoidable and their temporality, therefore becomes part of the equation; even the formula or algorithm is time-bound and always in transformation.

> Even technology is a fable or *Sage*, a transmitted message: when seen in this light it is stripped of all its (imaginary) claims to be able to constitute a new 'strong' reality that could be taken as self-evident. ... The myth of a dehumanizing technology, as well as the 'reality' of this myth in a wholly administrated and regulated society, are metaphysical accretions which lead us to continue to read the fable as 'truth'.[57]

Geometry has a privileged status in the history of architectural theory and practice. From Vitruvius until the end of the eighteenth century, geometry has been discussed prominently in all architectural treatises. Its status gradually changed until it became, in the late eighteenth century, a mere instrument of applied technology, as it appears in the work of Durand. As Alberto Pérez-Gómez and Louise Pelletier explain in *Architectural Representation and the Perspective Hinge*,

> "Durand's *mécanisme de la composition* supported his new rational and specialised theory, free from metaphysical speculations. ... In his *précis*, Durand expressed the notion that architects should be unconcerned with meaning; if the architectural problem was efficiently solved, meaning would follow. ... The aim was to represent the project objectively; the subjective observer we associate with perspective's point of view was consistently ignored"[58]

From a conception that posits geometry as an *art*—something which mediates between the human and the divine—we then come to an understanding of geometry as a *tool* for the use of the architect. In the mind of the engineer-architects who followed Durand's *précis*, geometry became a design mechanism, an extremely simplified geometrical object: a grid on which plans, sections and elevations could be drawn with efficiency.

In the realm of our contemporary architectural practice, ambiguity of language—in drawings and in written forms—is generally avoided. The instrumental language of architecture is being systematized a little more every day as the worldwide network becomes a communication tool for architects. The computer renderings function according to a "universal" mode of representation based on orthographic projections, rendered possible by the development of descriptive geometry (see fig. 5).[59] Space conceived of as homogenous, in

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[57] Gianni Vattimo, *The End of Modernity*, trans. Jon R. Snyder (London: Polity Press 1988) 29.

[58] Alberto Pérez-Gómez , and Louise Pelletier, *Architectural Representation and the Perspective Hinge* (Cambridge, Mass., and London: MIT Press 1997) 298-299.

[59] As Pérez-Gómez points out, in *Architecture and the Crisis of Modern Science*, it is with Gaspard

the Cartesian sense, implies that a perspectival representation of space, constructed by positing an ideal point of view (at infinity), becomes an accurate "scientific" means of representation, in which the image concords with the reality it depicts, or the reality intended to be built. In our contemporary architectural practice, architects tend to accept, uncritically, the rules of systematic geometrical descriptions as part of the design discipline; they *use* geometry as a tool regardless of its relation to philosophy and language. Nevertheless, the discrepancies between the architectural drawings (can they still be called drawings?) and the final built "product," even though they tend to be minimized, cannot be denied. In the tendency to collapse the architectural orthographic projections and the actual "building," architecture becomes just another object in space, a space that is objectified and removed from any temporal dimension, that is, removed from the immediacy of perception. In that sense, architecture becomes an image of itself.

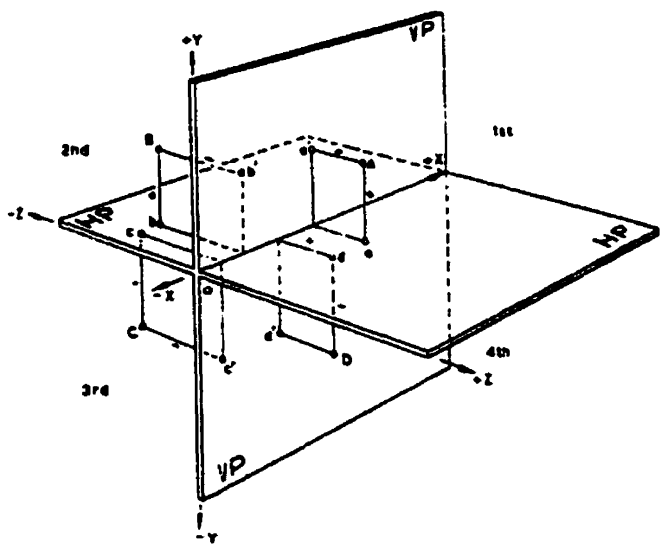

Fig. 5
Orthogonal planes distributed in the system of coordinates from R. G. Robertson' *Descriptive Geometry*, in Alberto Pérez-Gómez, *Architecture and the Crisis of Modern Science*.

Monge's *Géométrie descriptive* (1795) that geometry became an effective and precise mathematical instrument in order to describe reality. "Although the use of geometrical projections had been present in architectural design and other building techniques since the sixteenth century, ... Monge's method was the first to provide a truly synthetic system that could be universally applied to all arts and crafts, that is, to the totality of human action." With descriptive geometry, space could be considered in itself as a mathematical entity; according to Monge, there was no construction in descriptive geometry that could not be rendered accessible, in an universal manner, once translated into algebraic terms. See Pérez-Gómez, *Architecture and the Crisis of Modern Science*, 279-280.

A big revolving door

> *Euclid* Now what is it you really require in a Manual of Geometry?
> *Minos* Excuse me, but—with all respect to a shade whose name I have revered from early boyhood—is not that *rather* an abrupt way of starting a conversation? Remember, we are two thousand years apart in history, and consequently have never had a personal interview till now. Surely a few preliminary remarks—
> *Euc.* Centuries are long, my good sir, but *my* time to-night is short: and I never was a man of many words.[60]
>
> Dodgson, *Euclid and His Modern Rivals*

The conception of the notions of space and time has undergone successive transformations within the tradition of Western philosophy, transformations which remain, for the reasons mentioned previously, inevitably related to the changes of the scientific mind-set and the understanding of the Euclidean principles. Focusing on the *border* as a place to dwell, we shall now investigate the "making" of space. If Humpty Dumpty's wall, on the edge of which he becomes the master of meaning, is so *very* thin, perhaps the wall has no breadth, and in that sense, can be imagined as a geometrical plane. It may be thinner than the thinnest imaginable wall but, at the same time, so thick that it encompasses, on both sides, the worlds it was meant to separate. It becomes an interstitial space, the *logos* of linguistic links and connections. At the surface of the wall, the geometric figures illustrate the shape of ideas and the construction of arguments: they constantly appear and disappear. Geometric figures are generated through movement and happen in time—the translation of a plane, following a line, generates a body. The lines are the traces left by that movement. They are lines made of light. In the *in-between* realm of Geometry, the geometric figure never reaches a complete state of existence, it can only appear finite either as idea (the perfect cone) or as material artifact (all the different cones crafted by man). Hence, there is a depth in the very narrow wall, a depth residing in the traces left by the constant movement—in the alternation of light and shadow—and the rhythm which then becomes perceivable.

In some ancient mythologies, space and time were gods that could not be

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[60] Dodgson, *Euclid and His Modern Rivals*, 6.

separated: they were two expressions of the same order. In such a concept of the world, space was not a pre-existing and autonomous entity.[61] It had to be ordered and created, but mostly, it had to be kept alive and recreated now and then. Space and time were works of art.

In Greek mythology, Hermes and Hestia are gods that form a strange couple, or as Jean-Pierre Vernant says, "a problematic couple." They are often depicted together, tightly associated with each other, but unlike the other divine couples, "they are not husband and wife ..., or brother and sister ..., or mother and son ..., or protector and protected."[62] Rather, they seem bound together through their common friendship (*philia*) with mortal human beings. Hermes and Hestia, unlike the other gods who have their own realm in Olympus, are gods that dwell on earth, amongst men, and for that reason, are tightly linked to "earth." Hestia is associated with the center of spaces, with the circular fireplace (*hestia*) at the center of the house. She is the symbol of stability, of immutability, of unity: the central point—the *one*—from which all points of the sphere of the celestial bodies—the *cosmos*—are equidistant. On the other hand, Hermes is the god that symbolises movement. "If he manifests himself at the surface of the earth and, with Hestia, dwells in the houses of mortals, Hermes does so in the fashion of a messenger."[63] He is everywhere and nowhere, ubiquitous, associated with doors and roads, with all the spaces and actions that exist outside the stability of the house.

> "If they make a couple, ... it is because the two divinities are situated on the same plane, because their actions are applicable at the level of the real, because the functions that they fulfill are connected. ... It can be said that the couple Hermes-Hestia expresses, in its polarity, the tension that can be read in the archaic representation of space: space necessitates a centre, a fixed point that possesses a specific value and from which directions can be oriented and defined, all qualitatively different; but space presents itself, at the same time, as the place for movement which implies a possibility of transition and passage, from any point to any other point. .... Hestia is able to 'centralise' space, ... Hermes is able to 'set space in movement' ['mobiliser' l'espace]"[64]

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[61] The earthly ground remained somehow chaotic and unpredictable compared to the visible order of the celestial bodies.

[62] Jean-Pierre Vernant, *Mythe et pensée chez les grecs* (Paris: François Maspero 1969) 97. My translation.

[63] Ibid., 99.

[64] Ibid., 101.

The transposition of the early Greek myths into philosophical ideas has been problematic, from its very beginning, as we have seen in the paradoxical fragments inherited from presocratic thinkers. The status of *theoria* in Greek philosophy differs from myths; it is no longer an expression of religious beliefs. Ideas are organised, in a positive and rational manner, in order to make sense of the order of the cosmos and, as Jean-Pierre Vernant emphasises, this takes place in a radically different space, a space that is geometrical. Nevertheless, the concepts of time, movement and space, remain connected; they are discussed in relation to the order of the world, the *cosmos*.

It is with Emmanuel Kant (1724-1804), according to Deleuze, that the concept of time was finally isolated from the idea of movement. After this important Kantian reversal, time is no longer subordinated to movement. In order to express this transformation, Deleuze writes, using a verse from Shakespeare's *Hamlet*,

> ... *time is out of joint*, time is unhinged. The hinges are the axis on which the door turns. The hinge, *Cardo*, indicates the subordination of time to precise cardinal points, through which the periodic movements it measures pass. As long as time remains on its hinges, it is subordinated to extensive movement; it is the measure of movement, its interval or number. This characteristic of ancient philosophy has often been emphasized: the subordination of time to the circular movement of the world as the turning door, a revolving door, a labyrinth opening onto its eternal origin.[65]

In ancient conceptions, time and movement remained in a close relationship, but, after Kant, the roles are inverted; "It is now movement which is subordinated to time." The geometric figure of the concept of time changes or else it is observed from a different point of view.

> Time thus becomes unilinear and rectilinear, no longer in the sense that it would measure a derived movement, but in and through itself, insofar as it imposes the succession of its determination on every possible movement. It ceases to be cardinal and becomes ordinal, the order of an empty time. ... The labyrinth takes on a new look—neither a circle nor a spiral, but a thread, a pure straight line, all the more mysterious in that it is simple, inexorable, terrible.[66]

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[65] Gilles Deleuze, *Essays critical and clinical*, trans. D. W. Smith, M. A. Greco (Minneapolis: University of Minnesota Press 1997) 27.

[66] Ibid., 28.

Deleuze makes a reference to Borges; the labyrinth is inexorable because it is "the labyrinth made of a single straight line which is indivisible, incessant."[67] The encounter with the Mad Hatter and the March Hare, in *Alice's Adventures in Wonderland* seems to be related to that isolated aspect of time. Alice is told by the Cheshire Cat that the two characters live in opposite directions. She chooses to go and visit the March Hare but strangely, both the Hatter and the Hare share the same house, with their friend the sleeping Dormouse. Alice sits at their table and they have a nonsensical conversation. They ask her to solve a riddle to which they have no answer:

> Alice sighed wearily. "I think you might do something better with the time," she said, "than wasting it in asking riddles that have no answers."
>
> "If you knew Time as well as I do," said the Hatter, "you wouldn't talk about wasting *it*. It's *him*."[68]

Since the Hatter and the March Hare quarrelled with *Time*, he won't do a thing they ask (with the clock). Since then, it has always been six o'clock—tea-time—and the trio is constantly moving around the table. Alice then ventures to ask, "But [what happens] when you come to the beginning again?" "Suppose we change the subject," the March Hare interrupted, yawning.[69] It seems that the March Hare and his friends are caught in a circular argument, a meaningless and infinite cyclicality. Time is no longer present and their action or utterances no longer have weight.

It is also interesting to see how the two opposite directions that the Cheshire Cat indicated lead to the same point. Perhaps the two lines were, in fact, curves and eventually met at a symmetrical position from Alice's point of departure. This would make sense in *our* world. But if we try and imagine a space in which Time is no longer present, then, it is possible that Alice has remained at the same "place" even though she has been "moving." In such a space, time and, consequently, movement no longer bear any direct implica-

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[67] The ancient labyrinth is a vivid demonstration of this union of time and space. It is circular and is bound to the space created by the dance and its rhythm. There is an entry and an exit, a beginning and an end, but it expresses the constant "being lost" of life itself. The modern labyrinth can be imagined as an infinite line, as is admirably described in Borges's *Fictions*. See Borges, "Death and the Compass," in *Labyrinths*, 87.

[68] "Why is a raven like a writing desk?" The famous riddle was never answered in the story itself nor by its author. Carroll, *Alice's Adventures in Wonderland*, 97.

[69] Carroll, *Alice's Adventures in Wonderland*, 99-100.

tions. In *Through the Looking Glass* there is another passage that is quite similar. In order to remain exactly at the same place, in order to avoid movement, Alice and the Red Queen need to run faster than fast (see fig. 6). They run faster than the fastest imaginable speed and only then can they become immobile. In doing so, Alice and the Red Queen literally escape both the *real* and the *ideal* and in a sense become geometrical entities; they inhabit the interstitial space of geometry where movement and immobility paradoxically coincide.

In Wonderland, The Hatter and the March Hare have done something wrong and Time is upset. In our modern world, time is out of humour—beside himself. Even though we still perceive the cyclical dimension of archaic time, at a daily basis and through our calendar, the general concept of time is now linear. Time, as we now tend to conceive it, is the linear time of modern history. The time line extends infinitely in both directions, but the future is unfore-

Fig. 6
63 pence stamp from England showing Alice and the Red Queen running faster than fast (after John Tenniel's original illustration, from Lewis Carroll, *Through the Looking Glass*, 1872)

seeable. "'It's a poor sort of memory that only works backwards,' the Queen remarked."[70] It is indeed a *poor* sort of memory that only reaches in the past, and it may be implied, in the Queen's remark, that "memory" and "imagination" are similar modes of perception; that the mind is able to travel in both directions, that there can be a double *reading* of time. Time can be conceived as both *linear* and *cyclical*, simultaneously. On the one hand, time is a constant repetition of the same present. On the other hand, there is nothing but the past, always subsisting, and the future, always insisting. In between is the same limit, the geometric space of the event. Meaning consists precisely in this event; it is always becoming: always so close and yet so remote. This site of action may be the *logos* of the encounter of space and time.

There seems to be an extremely tight and yet hardly definable link between the experience of time—and space—and one's state of mind, between temporality and one's encounter with "reality." In Plato's *Theaetetus*, Socrates asks the following question: "how can you determine whether at this moment we are sleeping, and all our thoughts are a dream; or whether we are awake, and talking to one another in the waking state?" Theatetus's answer is rather confused:

> THEAETETUS: "Indeed, Socrates, I do not see by what evidence it is to be proved, for the two conditions correspond in every circumstance like exact counterparts. The conversation we have just had might equally well be one that we merely think we are carrying on in our sleep, and when it comes to thinking in a dream that we are telling other dreams, the two states are extraordinarily alike."
>
> SOCRATES: "You see, then, that there is plenty of room for doubt, when we even doubt whether we are asleep or awake. And in fact, our time being equally divided between waking and sleeping, in each condition our mind strenuously contends that the convictions of the moment are certainly true, so that for equal times we affirm the reality of the one world and of the other, and are just as confident of both."
>
> THEAETETUS: "Certainly."
>
> SOCRATES: "And the same holds true of disorders or madness, except that the times are not equal."[71]

It is not clear what Plato means when he has Socrates state that there is an inequality in times between dreams, moments of insanity and the awaken state.

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[70] Carroll, *Through the Looking Glass*, 248.

[71] Plato, *The Collected Dialogues*, 946.

Theaetetus insists that the difference should not be understood as a quantitative one. Hence, there seems to be a relationship between our perception of things and a qualitative aspect of time, but this relationship is ambiguous; one's perception happens in time, it is simultaneously being and becoming, yet never exactly being or becoming. In a person's moments of insanity, the notion of time changes—time almost ceases to exist. In the Platonic text, the "dreamer" and the "mad man" are spoken about in similar terms, as if they shared this problematic perception of the real. In *The Annotated Alice*, Martin Gardner draws our attention to an entry from Carroll's diary in which he reflects on this precise topic. Carroll's question resonates with the Platonic text; he wrote:

> Query: when we are dreaming and, as often happens, have a dim consciousness of the fact and try to wake, do we not say and do things which in waking life would be insane? May we not then sometimes define insanity as an inability to distinguish which is the waking and which is the sleeping life? We often dream without the least suspicion of unreality: 'Sleep hath its own world,' and it is often as lifelike as the other.[72]

From Alice's encounter with the Cheshire Cat, we learn that Wonderland may be the space where dreamers and mad men eventually meet. Alice asks the Cheshire Cat:

> "Would you tell me, please, which way I ought to go from here?"
>
> That depends a good deal on where you want to go," said the Cat.
>
> "I don't much care where—" said Alice.
>
> "Then it doesn't matter which way you go," said the Cat.
>
> "—so long as I get *somewhere*," Alice added as an explanation.
>
> "Oh, you're sure to do that," said the Cat, "if you only walk long enough."
>
> Alice felt that this could not be denied, so she tried another question, "What sort of people live about here?"
>
> "In *that* direction," the Cat said, waving its right paw round, "lives a Hatter: and in *that* direction," waving the other paw, "lives a March Hare. Visit either you like: they're both mad."
>
> "But I don't want to go among mad people," Alice remarked.
>
> "Oh, you can't help that," said the Cat: "we're all mad here. I'm mad. You're mad."
>
> "How do you know I'm mad?" said Alice.
>
> "You must be, " said the Cat, "or you wouldn't have come here."[73]

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[72] Gardner, *The Annotated Alice* (London: Penguin Books 1960), 90.

[73] Carroll, *Alice's Adventures in Wonderland*, 88-89.

In the work of Lewis Carroll, the narrative develops itself at the limits of logical processes, following a nonsensical movement. In such a process, time seems to acquire a qualitative ambiguity. Caught in the senseless actions of time—of a Time which is not present—Alice wanders and wonders. There is no precise goal, no really important place to go, except when the White Rabbit passes. Alice then seems to be forced to follow him. The Rabbit is obsessed with time, with the fact that it shall be too late. The Rabbit is running after time but as we know, Time went away. The Rabbit, like many of the characters that Alice eventually meets in Wonderland, seems to have very unstable mood. It is often the case, in Carroll's fiction, that the character transform themselves—successively becoming other, if not literally, at least in their dispositions (see fig. 7-14). If one comes to conceive of oneself as constantly changing, the notion of existence is weakened and cannot be grasped easily. "'... I wonder if I've been changed in the night? Let me think: was I the same when I got up this morning? I almost think I can remember feeling a little different. But if I'm not the same, the next question is, "Who in the world am I?" Ah, that's the great puzzle!'"[74] As Maurice Merleau-Ponty points out in *Sense and Non-sense*, "There is a perpetual uneasiness in the state of being conscious. At the moment I perceive a thing, I feel that it was there before, outside my field of vision. There is an infinite horizon of things to grasp surrounding the small number of things which I can grasp in fact."[75] Merleau-Ponty points out that this uneasiness is even greater in our encounter with other people. This uneasiness seems to be exacerbated once space is conceived of apart from any temporal dimension. When time is removed from space—as in basement spaces lit by artificial light (the first space into which Alice advances after falling down slowly in the tunnel)—space becomes frightening, as if it was created by something overwhelming and horrifying, something entirely *other*.[76] In that sense, there is in one's perception of one's surroundings, an alienation of oneself, a loss—one has to give away something in order to engage with this "otherness" that the world represents.

> [Alice] looked down at her hands, and was surprised to see she had put on one of the Rabbit's little white kid gloves while she was talking.

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[74] Ibid.,37.

[75] Maurice Merleau-Ponty, *Sense and Non-Sense*, trans. Hubert L. Dreyfus and Patricia Allen Dreyfus (Evanston Ill.: Northwestern University Press 1964, 28.

[76] On this notion of "same, different and other", see Paul Ricoeur, *The Conflict of Interpretation: Essays in Hermeneutics*, ed. Don Ihde (Evanston: Northwester University Press 1974).

fig.7

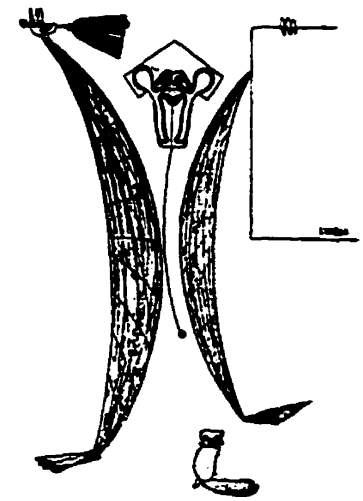

fig.8

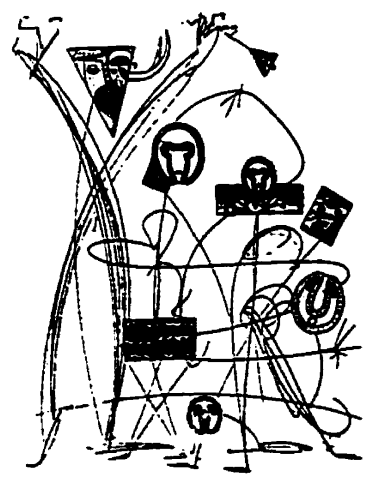

fig.9

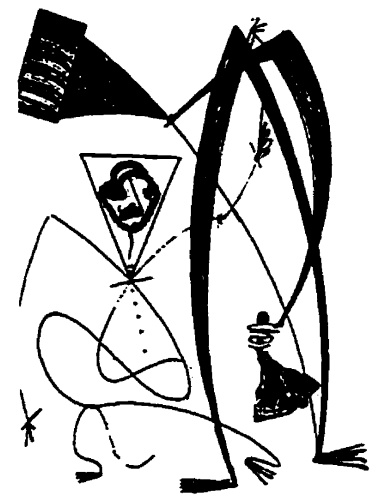

fig.10

fig.11

fig.12

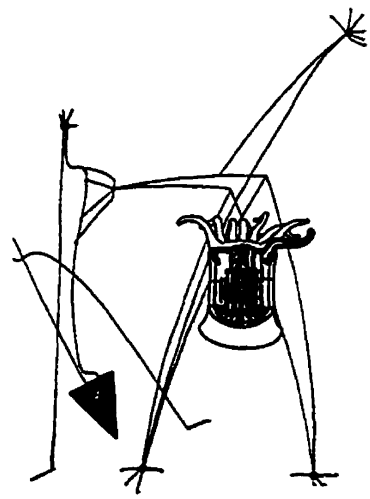

fig.13

fig.14

Fig. 7-14
The illustrations by Max Ernst for the French translation by Henri Parisot of *The Hunting of the Snark* show the frequent transformations of the characters in Lewis Carroll's work: the hyperbolic Bellman appears differently in each of these illustrations. From Lewis Carroll, *La chasse au Snark* (Paris: L'age d'or aux Éditions premières 1950).

> "How *can* I have done that?" she thought. "I must be growing small again." She got up and went to the table to measure herself by it, and found that, as nearly as she could guess, she was now about two feet high, and was going on shrinking rapidly: she soon found out that the cause of this was the fan she was holding, and she dropped it hastily, just in time to save herself from shrinking away altogether.
>
> "That was a narrow escape!" said Alice, a good deal frightened at the sudden change, but very glad to find herself still in existence.[77]

In Wonderland, Alice enters into a "becoming-mad" and gradually loses all notion of her identity: she had to leave her "self" outside the alterable world of the border. "But it's no use now," thought poor Alice, "to pretend to be two people! Why, there's hardly enough of me left to make one respectable person!"[78] Yet, as we shall discover, this loss allows her to participate in the creation of space. The spaces that Alice experiences are always different expressions of the same space. These spaces oscillate between worlds that are different but equally real. The borderline between these worlds, contains—or *is*, itself—another world. The border cannot be reduced to a plane, it expands into a zone. It is actually where things happen, where the passage of time is traced. Could Wonderland be the land of geometry, and if so, of which geometry (see fig. 15)?

In *Alice's Adventures in Wonderland*, Lewis Carroll was addressing the question of one's encounter with the world, the question of the fragility of perception and its relation to knowledge and understanding. As a writer of the nineteenth century, he lived in a world generally understood according to Cartesian, Newtonian and Kantian ideas. Indeed, it is with Descartes that the problem of reality in relation to perception and knowledge eventually took on an entirely new and different shape. In the *Meditations*, Descartes's argument starts with a radical assumption that, not unlike dreams, the reality of experience can also be subjected to doubt. "Let us suppose, then, that we are now asleep, and that all these particulars, namely, that we open our eyes, move our heads, hold out our hands, and such like actions, are only false illusions."[79] Descartes aim is to isolate, if not a few, at least *one* absolute certainty, from which he could base his understanding and eventually prove the existence of God. He problematises what had remained, for Plato and until that era we have

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[77] Carroll, *Alice's Adventures in Wonderland*, 39.

[78] Ibid., 33.

[79] René Descartes, *Discourse on Method and The Meditations*, trans. F. E. Sutcliffe (London:Penguin 1968) 97.

called the Enlightenment, a "given" certainty: the mere fact that reality *exists*.

Consequently, in the Cartesian view, the very notion of existence and reality became useless and misleading. The only truth was, for Descartes, acquired through reason alone, after mental observation and careful analysis. This question of the "reality" of our perception and the world that we inhabit, and in the same vein, the mere question of our existence, even though this question has been "transformed" in the modern era, remains open.

Fig. 15
Max Ernst, "Lewis Carroll's Wunderhorn," (Stuttgart: Manus Press 1970). Ernst represents Carroll's Wonderland as a circle inscribed in a triangle. The triangle has often been associated with the aspect of "wonder," with the distance that separates us from higher instances (for example the figure of the Trinity), such instances which are rendered accessible through geometry.

Architecture's drama

> Just at this moment Alice felt a very curious sensation, which puzzeled her a good deal until she made out what it was: she was beginning to grow larger again, and she thought at first she could get up and leave the court; but on second thoughts she decided to remain where she was as long as there was room for her.
>
> "I wish you wouldn't squeeze so," said the Dormouse, who was sitting next to her. "I can hardly breathe."
>
> "I can't help it," said Alice very meekly: "I'm growing."[80]
>
> Carroll, *Alice's Adventures in Wonderland*

We have observed that in the modern era, the concepts of time and space underwent drastic changes. When the notion of infinity became inherent in the material world itself and no longer specific to the realm of ideas—that is to say, once the Cartesian mind-set and Newtonian physics became what constitutes the generally accepted idea of the world—the notions of space and time were divorced and even today, remain isolated from one another. This disjunction has consequences for how architects imagine space, but mostly, it affects our relationship, as human beings, with space and objects, as well as the possiblility for meaning to be generated from this encounter with the world.

So-called Cartesian space is a homogeneous, infinite quantity: a set of co-ordinates. It is a quantity that can be measured and reduced to horizontal and vertical planes, and intersections. In homogenised space, horizontality, verticality and depth are equivalent, with no particular qualitative aspect.[81] A tower can be the same as a tunnel. In *The Vision of the Three T's*, Dodgson criticises the modern concept of space as homogeneous, removed from time and in which gravity rules as a law, detached from the reality of experience. In the story, an architect arrives at a construction site, dressed in an outfit that he claims is timeless, completely outside the transience of fashion, with ribbons that defy gravity. He can find inspiration in a piece of stilton cheese; the materiality of the building is irrelevant. Cheese or stone, it is all the same; only form

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[80] Carroll, *Alice's Adventures in Wonderland*, 147.

[81] As Maurice Merleau-Ponty explains in *Phenomenology of Perception*, our experience of height is very different from that of horizontal distances, and depth is perceived (in movement) not just through vision but also through touch, smell, hearing and taste. The link between perception and reason (body and mind), and between man and the world, involves our temporal existence. Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (London: Routledge & K. Paul 1962) 255.

matters.[82] In a concept of space as something that pre-exists, the wall becomes a denuded limit that subdivides space. Notions of temporality and the evanescence of things are eclipsed.

The problematic status of the limits, the way the depth of the limits tends to be forgotten, is somehow manifest in the architectural thinking we have inherited from "modernity." In such a mode of thought, the limits, may they be a wall or a glass bay, are shoved to their minimal expression; they then become bare Cartesian planes in the homogenised space of the x-y-z.The fluctuating nature of the border, the interstitial space of the paradox, because of its inherent evanescence, is not easily acknowledged in the "modern" context. Since modernity implies a falling of the divine realm into the human, or else an elevation of the human to the level of the divine, and, somewhere in that process, a dissolution of the geometrical realm into the new solvent (like the salt in the water of the ocean), not only do the limits tend to be ignored, they are hardly graspable in this new state of equivalence. The interstitial space is reduced to a surface, but there is , in such a reductive attitude, an inherent danger; there is nothing more fragile than a surface and once a hole starts to appear, it quickly opens onto a nonsense that is deeper and more frightening than Carroll's plays on words. There is a difference between a "becoming-mad" that is never fully achieved and violent madness (or sanity). Any effort to reintroduce some depth, to reverse the processes of thinning and flattening, seems futile as long as we remain caught in a conception of space as homogenous. Depth is not dependent upon space only, and moreover, it entertains a strange relationship with the *very* thin. In *Phenomenology of Perception*, Merleau-Ponty is questioning the Cartesian understanding of objects and space as *extensions*, an understanding in which space—objects in space—are perceived visually, from the outside, in the same manner as if they were depicted on the plane of a picture. In such a mode of thought, "depth is a *third dimension* derived from the other two."[83] He writes:

> The enigma consists in the fact that I see things, each one in its place, precisely because they eclipse one another, and that they are rivals

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[82] It is interesting to read here the influence of John Ruskin, for whom the encounter of human sensibility and the work of art was of great importance. Ruskin defended such an attitude against pragmatism. For him the materiality of architecture was primordial: one should ask the stone what it has to say. A stone could tell the story of how it was crafted and could reveal the passage of time upon its face (but what we make of this story is itself another story). See John Ruskin, *The Stones of Venice* (London: Collins 1960).

[83] Merleau-Ponty, *Phenomenology of Perception*, 172.

> before my sight precisely because each one is in its own place. Their exteriority is known in their envelopment and their mutual dependence in their autonomy. Once depth is understood in this way, we can no longer call it a third dimension. In the first place, if it were a dimension, it would be the *first* one; there are forms and definite planes only if it is stipulated how far from me their different parts are. But a first dimension that contains all the others is no longer a dimension, at least in the ordinary sense of a *certain relationship* according to which we make measurements. Depth thus understood is, rather, the experience of the reversibility of dimensions, of a global "locality"—everything in the same place at the same time, a locality from which height, width and depth are abstracted, of a voluminosity we express in a word when we say that a thing is *there*.[84]

The perception of space is not impassive, it implicates one's surroundings and one's state of distraction or concentration. But mostly, it involves the postures that the body adopts in movement, mood, bodily humours and humour. (see fig. 16) The perceiver is not *in* space. Space does not pre-exist. The perceiver, like Alice, is actually creating spaces: a succession of time-space fragments that cannot be isolated but constitute a continuous *becoming*. Valéry evoked this encounter in similar terms. In one's encounter with "reality," one's soul follows the movement of an *irreal* dance. The beautiful dancer, who somehow represents one's perceptions, is both *form* and *idea*, and can be perceived only in movement.

> *Phaedrus*: She is dancing yonder and gives to the eyes what you are trying to tell us. ... She makes the instant to be seen. ... She filches from nature impossible attitudes, even under the very eye of Time! ... And Time lets himself be fooled. ... She passes through the absurd with impunity. ... She is divine in the unstable, offers it as a gift to our regard! ...
> *Eryximachus*: Instant engenders form, and form makes the instant visible.
> *Phaedrus*: She flees her shadow up into the air.
> *Socrates*: We never see her but about to fall.[85]

Even though Lewis Carroll's work expresses almost everything through nonsense, that is to say even though there is no apparent common-sense meaning in the text, no apparent reasoning or theoretical framework, the spatial-rhythmic quality of his writing conveys a deeper meaning. As Octavio Paz

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[84] Ibid., 180.

[85] Valéry, "Dance and the Soul," *Collected Works* Vol. 4, 58.

Fig. 16
Alice is caught in space. Drawing by Lewis Carroll for the manuscript of *Alice's Adventures Under Ground* (London: Macmillan 1886)

notes in *The Bow and the Lyre*, Lewis Carroll's prose becomes poetry through its rhythmic sequences of images.[86] The reader is continuously recreating these images, following the rhythm of the poem that not only invokes one's imagination, but puts one's whole body into a different posture—a dancing movement.

According to Paz, this enables the space of the book to emerge into the world. We comprehend it, we are comprehended by it.[87] If the construction of the story is good, it calls for a real participation of the reader-speaker who builds, in a rhythmic and corporeal manner, *a* meaning. This can be called a *ritournelle*.[88] In a similar way, our perception of built space has to do with the common activities that it shelters; with that *ritournelle* whistled by our body, every day, in the successive depths of this rhythm-space. As Merleau-Ponty explains, "something in space escapes our attempt to look at it from 'above.'... I do not see it according to its exterior envelope; I live in it from the inside; I am immersed in it. After all, the world is all around me, not in front of me."[89] We inhabit and tame architecture in order to make it belong to us, who belong to it. We render it familiar and eventually construct a meaning. This transformation is possible but we have to make it happen, dancing a *ronde* within the walls.

> Now we are at home. But home does not pre-exist: it was necessary to draw a circle around that uncertain and fragile centre, to organise a limited space ... Sonorous and vocal components are very important: a wall of sound, or at least a wall with some sonic bricks in it... From chaos, *Milieus* and *rhythms* are born. This is the concern of very ancient cosmogonies. ... Every milieu is vibratory, in other words, a

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[86] Paz, *The Bow and the Lyre*.

[87] Merleau-Ponty uses this sentence from Pascal *Pensées*: 'Je comprend le monde et le monde me comprend.' In the English version which I am referring to, the translator uses the word understanding: 'I understand the world ... it understands me.' The French meaning of the word is double: it can mean understanding, in an intellectualised way, but it can also mean 'to comprehend,' in a physical way, that is, 'to circumscribe.' I use this passage in relation to the space of the book, in order to show the link between the bodily postures involved in the rhythm that is created while reading of a story, and the rhythmic aspect of our perception of spatio-temporal fragments. Merleau-Ponty, *Phenomenology of Perception*, 408.

[88] The *ritournelle* is a round or a nursery rhyme, in the translation of *Mille Plateaux* the word "refrain" is used. See Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* , trans. Brian Massumi (Minneapolis: University of Minnesota Press 1987) chapter 11. In French, *Mille Plateaux: capitalisme et schizophrénie 2* (Paris: Minuit 1980).

[89] Maurice Merleau-Ponty, "Eye and Mind," in *The Primacy of Perception*, ed. Richard C. McCleary (Evanston,Ill.: Northwestern University Press, 1964) 175-178.

> block of space-time constituted by the periodic repetition of the component.[90]

Alice enters the house of the White Rabbit and loves it—as if it was her home—but when she grows too big to see through the window, the "outside" of her walls is defined by voices. When she observes the Mock Turtle and the Griffin execute the Lobster-Quadrille, the space around her if defined by the exhuberant movements of the dancers (see fig. 17).

The space-time fragments created through our encounter with the world are not perceived in a homogeneous way. We bring together these perceived spatial fragments, but not in a rational way. Instead we follow a logic of nonsense, as in the oneiric creation of a story: some stanzas of a poem become more familiar, while others remain obscure; meaning is not evenly distributed. It is the alternation of "known" territories and "less known" spaces that creates a rhythm.[91] It is this difference that possesses the primary rhythm, although repetition is also rhythmic[92]. The difference is again this "in-between," this border which reveals us as geometricians. Things come together in a kind of non-fixity, a flow, a tide. The rhythm is created by a succession of material aggregates and silences. The rhythmic matter is continuously transforming itself.

I have tried to render explicit the mobile character of limits in order to cast light on the temporal dimension and the perception-based aspect of space. This allows for a realization of the important participation of language, and geometry, in the process of creation (and recreation) of works of art. Meaningful architecture (and there may be doubtd as to whether such a thing still can exist) might function following a programmatic narrative, and it could be the plot, hidden in the work but nonetheless accessible through embodied perception, which conveys a kind of meaning to a built work experienced in time. Architecture has to be scripted, it departs from the imagination of the architect and it is made "real"—geometrically—through the processes of building and dwelling (which, for me, are two words expressing the same "event" in different ways). In *The Case of Wagner*, Nietzsche expresses the

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[90] Ibid., 311-13.

[91] It is in such territories that we can walk at night and find our way without seeing anything. It is in such space that we happen to know every detail of a wall, the very disposition of each object.

[92] On this notion of rhythm in the *ritournelle*, see Deleuze and Guattari, *A Thousand Plateaus*, 314.

Fig.17
The Mock Turtle and the Griffin reenact the "Lobster Quadrille". Drawing by Lewis Carroll from the manuscript of *Alice's Adventures Under Ground* (London: Macmillan 1886)

problematic status of the word "drama" in relation to its commonly understood meaning as "action."

> "It has been a real misfortune for aesthetics that the word *drama* has always been translated *action* [handlung]. It is not Wagner alone who errs at this point, the error is world-wide and extends even to philologists who ought to know better. Ancient drama aimed at scenes of great "pathos"—it precluded action (moving it *before* the beginning or *behind* the scene). The word drama is of Doric origin, and according to Doric usage it means "event," "story"—both words in the hieratic sense. The most ancient drama represented the legend of the place, the "holy story" on which the foundation of the cult rested (not a doing but a happening: drama in Doric actually does not mean "do").[93]

The program for an architectural construction is imagined by the architect, beforehand. As in the Doric drama, the program is the story that is written, the "event" which is prior to the action, prior to the foundation. It is written before the building is erected; it is before and always behind; it is always occupying another space and another time. The program is a way to set conditions for the action to take "place." It constitutes the story and eventually, its reenactment. It is a plot, but one that is revolving on itself, repeated over and over, in similar ways but, at the same time, constantly changing, constantly in the process of being "made." Yet, it is only through the "building" that this narrative is actualised. Moreover, the act of "building" does not end once the last brick is laid—once the building is finished—but goes on, or starts anew, once the edifice is inhabited. The experience of the building in time, every day, is a re-actualisation of the program, which remains implicit, hidden behind the walls—or is it rather within their surface? The program is the drama, the time-bound creation of spaces is the action. In that sense, architecture becomes an event.

The question then becomes, and this is always the tricky part, what is the drama—the story, the event—that we, as architects, wish to communicate. The answers do not seem to flow from all possible directions. Yet, there is something important in understanding that there is no real possibility for a transparent and direct transcription between the story written and its actualisation through the architectural process. Since we are bound to language and to our historical condition, which affects our reality and life, all we can aim at is a momentary disclosure, a retelling or a rereading of notions that remain hidden, not only in the realm of ideas and the work of philosophers, or, in our case, in

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[93] Nietzsche, *The case of Wagner* (New York: Vintage Books 1967) 174.

the work that occupies our attention, the stories written by Lewis Carroll, but also, through our work as "builders" and geometricians. Heraclitus knew that "an unapparent connection is stronger than an apparent one."[94] For all these reasons, nonsense may represent, for us, a powerful means for conveying meaning in a way that prevents us from falling back into a systematic methodology or idealism.

Carroll's work is extremely significant, precisely because it deals with the surface, a notion too often disregarded since we think we "know" it.[95] By looking at opposite notions from a different angle, though, by bringing them closer, under the same spot, what is revealed to us is the depth of the surface, the space-time of the contact of paradoxical notions and the sound it makes. In that sense, the work of Lewis Carroll is immensely powerful: it deals with deep, obscure ideas, metaphysical concepts and problems in a light, joyous way that even a child can grasp. It addresses primordial questions through absurdity and nonsense, as if Lewis Carroll was clearly aware of the impossibility to voice the unspeakable. Through nonsense, meaning is revealed, momentarily. The revelation constitutes an event—a geometrical event. It is an event which triggers such notions as time, movement, space, extension, existence, reality and truth. Might it be possible, even today, to think in a geometrical way and induce, in architecture, the wondrous qualities that geometry brings about?

Lewis Carroll wrote *for* children or, to be more precise, *on behalf of* children, putting into words their fascinating vision of the world.[96] In the same way, we could say that Lewis Carroll wrote for Euclid, *on his behalf*, trying to express the essence of geometry, its unquestionable truths. In the *Alices*, geometric figures become characters. Space and time also become characters; they speak to us, revealing to the reader their paradoxical nature. Euclid finds, in Wonderland, a retreat where he can escape from his modern rivals and possibly enter into a dialogue with the new geometries. Between fiction and the real,

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[94] Kirk, Raven, and Schofield, *The Presocratic Philosophers*, 192.

[95] Alice falls in the rabbit hole, in the depth of the earth, but soon, she manages to find her way out and her movements become lateral movements of translation, circular movements around an uncertain center. On this importance of the surface in Carroll's fiction, see Deleuze, *The Logic of Sense*, especially 4-11.

[96] As Gilles Deleuze remarks, "To write is not to recount one's memories and travels, one's loves and griefs, one's dreams and fantasies. ... The ultimate aim of litterature is to set free, in the delirium, this creation of a health or this invention of a people, that is, a possibility of life. To write for this people who are missing." See Deleuze, *Essays Critical and Clinical*, chapter 1, p. 4.

between day and night, in this space of ambiguity, opposites come together and our perception becomes what it always was: a *hallucinatory* experience. The limit, the border, is a world of *possibles*.

Mise-en-scène for an architectural installation based on Lewis Carroll's *Alice's Adventures in Wonderland*

> Ancient drama aimed at scenes of great "pathos"—it precluded action (moving it before the beginning or behind the scene). The word drama is of Doric origin, and according to Doric usage it means "event," "story"—both words in the hieratic sense. The most ancient drama represented the legend of the place, the "holy story" on which the foundation of the cult rested (not a doing but a happening: drama in Doric actually does not mean "do").[1]
>
> Friedrich Nietzsche, *The Case of Wagner*

> The *outside* is not another space that resides beyond a determinate space, but it is rather the passage, the exteriority that gives it access—in a word, it is its face, its *eidos*.[2]
>
> Giorgo Agambem, *The coming community*

This project presents the mise-en-scène for an architectural installation. A mise-en-scène is usually understood as the scenery and properties of an acted play. It is also, and this is what I wish to emphasise, what constitutes the surroundings of an event.

The project should be understood as a test, as a way to experiment and try to address the issues of time, space, narrative and perception, the relation between such notions and the process of "building." The experiment takes place in a condensed laps of time: the time of a temporary installation. Through this project, I wish to observe the importance of human communication and language in the actualisation of the building's programmatic reality.

In the context of our modern condition, in which an awareness of the inevitable distance—the mediated aspect of our perception through language—becomes important, the aim is to reveal the programmatic potential of fiction. The idea is to set different conditions and to observe, and experience, the reaction of an audience; how we, as individuals, behave within such a framework and in relation to others. The installation is meant to address a larger space-time fragment, its aim is to hint at the repetitive and fragmentary aspect of one's perception of architecture. How can the active process of creating spaces, a process which happens in time and through embodied perception, be hinted at? This might be when fiction and reality are set in motion and touch; in between.

The installation will take place in a hall, an exhibition room. The location and qualities of that room are not determined and, for the purpose of imagining this project, they will be abstracted. We start with a room, an empty room defined by four walls—bare walls—and a standard entrance door (Such a room should not be difficult to find these days; there seems to be one in every museum). This room will be represented in its most simple expression: a cube. I am referring to a room—any room or no room—that is, the idea of a room in its most elemental meaning.

An "object" is displayed in the cubic space of the exhibition room, an object which I call a spatialising and temporalising device. The device is made out of a number of screen-panels which are all hinged together in a series. The panels are identical in their dimensions but different in what they represent; they depict or allude to different parts of the story; they have different functions; they occupy a different position—a specific location and orientation—within the larger space of the exhibition room. Each panel is made of a rectangular steel structure, which stands on one of its smaller sides and can pivot around the axis or hinges. The rectangular structure acts as a frame, which is filled with a thin surface of oiled, engraved and printed sheets of paper. The pieces of paper are pierced, cut, arranged together in order to create motifs. Once oiled, the paper becomes translucent and different kinds of paper produce different effects. The pieces of paper are sewn together and the seams—the overlapping of successive layers of paper—because they affect the passage of light through the surface, create lines. Distorted and flattened perspectival representations of the imaginary spaces that Alice experiences in the story can be depicted through this means (there is, in the appendix following this project, photographs of a previous scenic device—a dressing screen—through the making of which these "techniques" have been experienced).

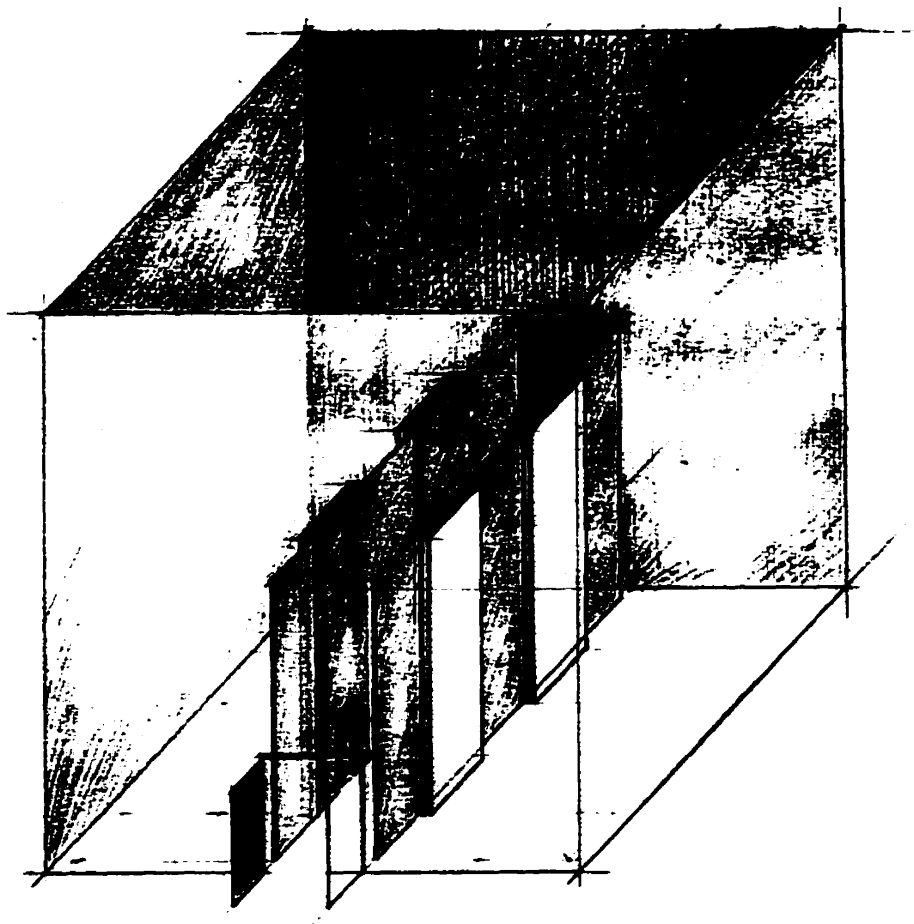
The program (or the drama):

The doors of the room open. People enter into a long, narrow and very high corridor created with the panels. In order to make the series of panels fit in the room in such a disposition, some of the panels have to be folded back against others. This creates an overlay of three surfaces behind four of the panels. These four panels are the ones through which one could pass, but the passages are "locked" by the successive layers folded behind, blocking the apertures or "doors." The audience can see through the screens; they see, behind the sur-

face, the rest of a room which is inaccessible to them. Since there is light only in the corridor space, the rest of the room is left in the dark and acquires a mysterious quality. If the space of the corridor is the *inside* space, the remaining, and inaccessible, spaces on both sides of this corridor become *outside* spaces. The width of that corridor is identical to that of the entrance door-way, and the corridor is almost as long as the room. At the far end of the corridor, in axis with the entrance doors, the center panel is a mirror. Once the entrance doors, which surfaces are also mirrored, are closed, they constitute the second mirror; the space of the corridor is sent off to infinity.

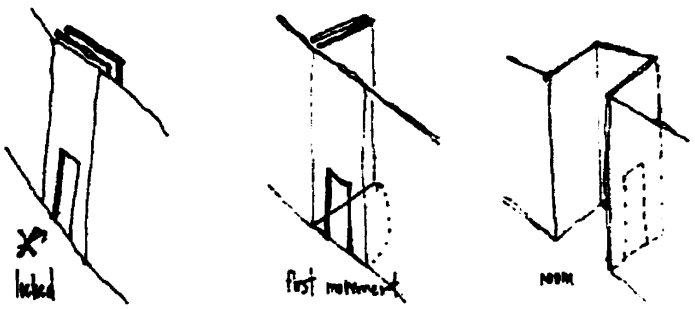
There are more and more people. It starts to fell crowded and uncomfortable and warm and tensed. It takes a little while before anything happens. People fell like they are caught in an elevator; the same kind of tension is built

panels forming a long and narrow corridor

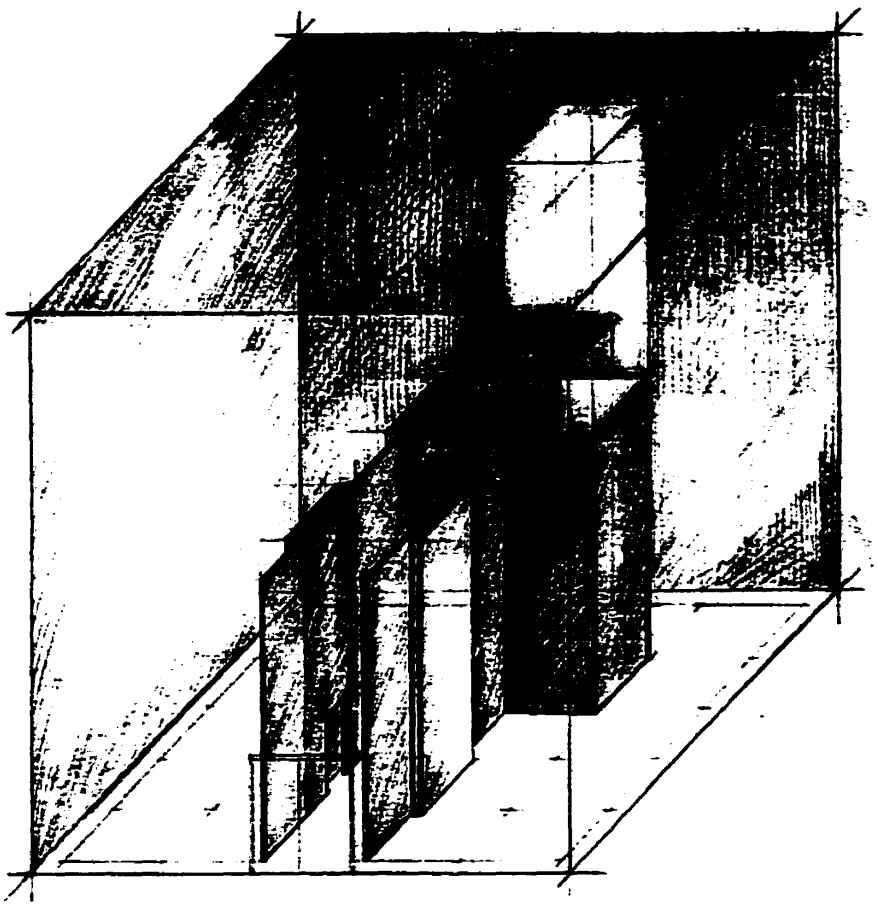


by the claustrophobic quality of that corridor.

There are performers/actors who move, *incognito*, among the crowd. They try and make contact; trying to get some information to circulate between people so that what is supposed to happen can, eventually, happen. For example,



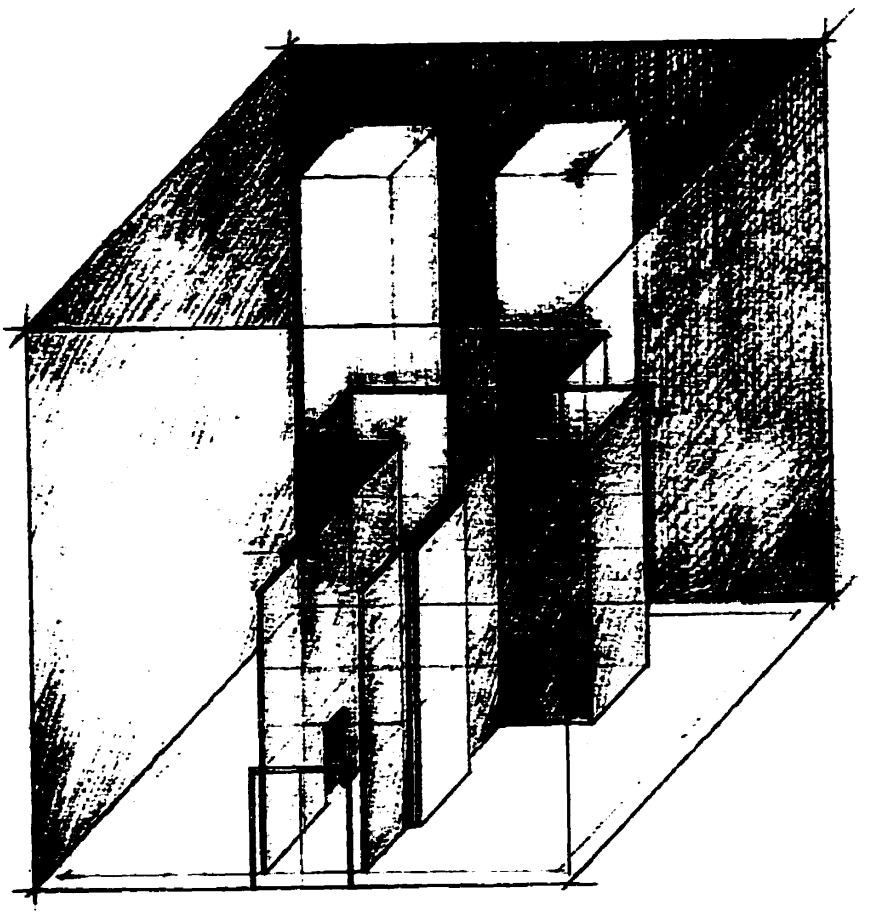
unfolding of the first room



there is one person who goes around saying: "Excuse me, my watch has stopped and I need to know the exact time. I have to give the technicians a cue. Could you please tell me, precisely, what time it is? I think we are late; we must be late." This person's behaviour adds to the general tension and discomfort of the whole situation; something has to happen.

When the cued moment comes, a noise fills in the space: it indicates the beginning of the movement. Depending on the will of the audience to participate and, also, on the dynamic of communication that was installed between the "designated" performers and the "public," the screen-panels will be moved, by the performers alone or with the help of the crowd. Rooms will be formed by the unfolding of the superimposed layers of panels that were previously blocking the aperture in the side "borders" of the corridor. The unfolding

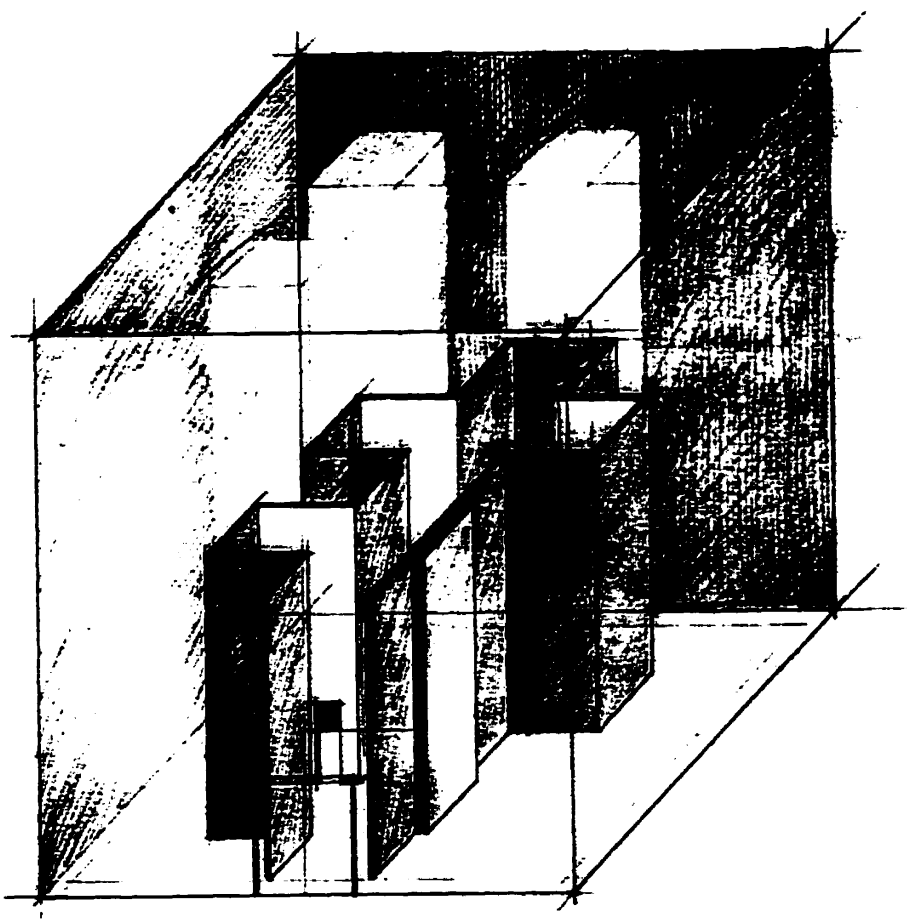
secoond room



process is indicated on the panel; it is represented by a series of dotted lines, arrows and dots—indications which appear on sewing patterns—which give the precise directions for the tasks to be executed; which indicate the folding and unfolding of the "surface." Once the first room is formed, these representations begin to make sense for the members of audience and they can engage in the process of "creation" of the three remaining rooms. The four rooms are identical in their physical dimensions but they vary in their orientation in respect to the larger space and in respect to each other. Moreover, the temporal dimension of unfolding each room varies.

Once these rooms are formed, the audience can pass through apertures and access the "outside" space, which becomes integrated in the spatial and temporal dimensions of the event. Then, one can come to realise that there may be

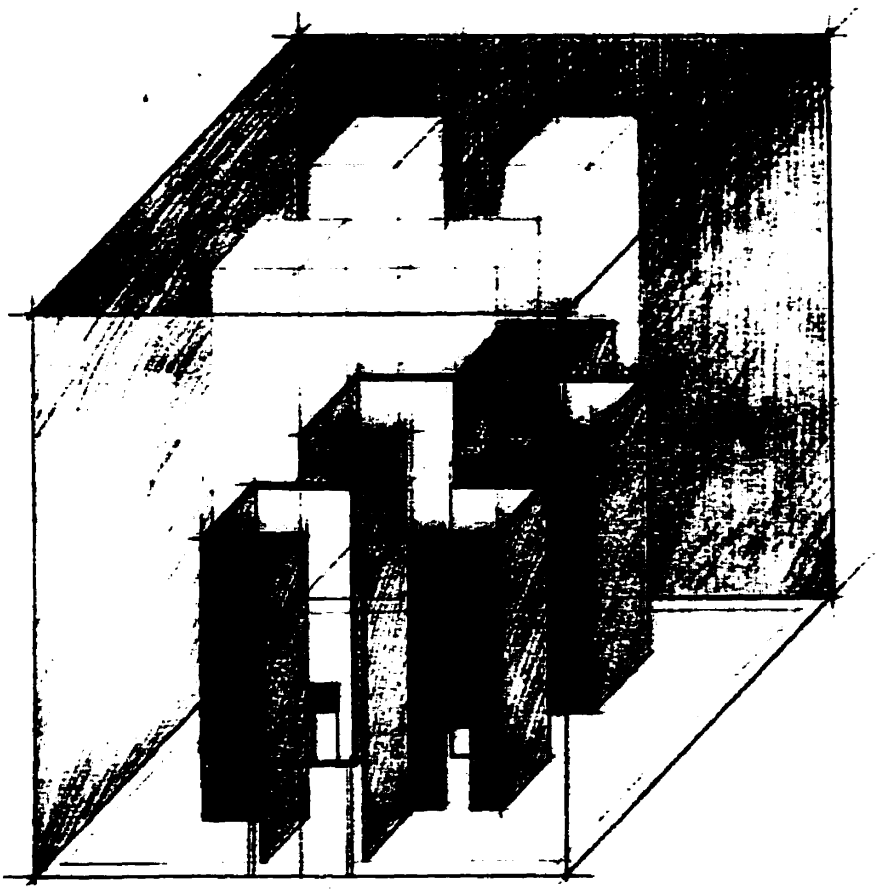
third room



a linear representation in the motifs embedded in the surface of the panels. The "reading" of this narrative tread is rendered fragmentary and discontinuous by the fact that there are other people who are moving; wandering in a strange, almost choreographic manner, around the panels, through the surface, in and out of the rooms.

The whole event reaches an end when the "membrane," the surface, is completely unfolded. The inside space becomes a room within a room. The unfolded surface is set away from the wall of the exhibition room, leaving an extremely narrow corridor, an interstitial space, for the people who end up caught within the two "walls" to escape and go out. Once the screen is completely unfolded, the representational aspect of its surface becomes linear (or is it rather cyclical?) and the narrative may be read. Connections can be made,

fourth room

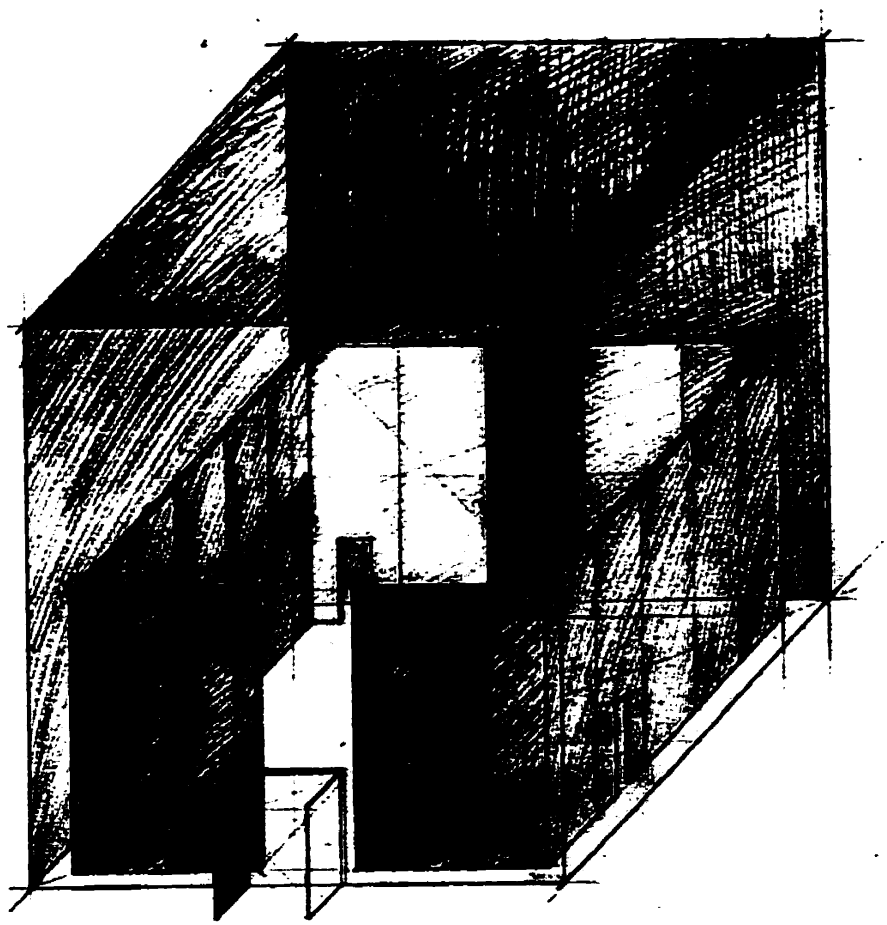


in retrospect, and the process acquires meaning(s). In a sense, we are back to a fixed notion of space—back to the Cartesian homogenised space—and yet, the exhibition room is no longer exactly the same room, traces were left by the movement of the surface: real and ideal traces interconnected by the geometrical movements—rotations and translations of planes—in the space and time of the event.

notes:

[1] Nietzsche, *The case of Wagner,* 174.
[2] Giorgio Agamben, *The Coming Community* (Minneapolis: University of Minnesota Press 1990) 67,8.

complete unfolding of the panels, forming a room within a room



"Borderland," a performance of fragments from Carroll's *Alice*

May 13, 1997.

The first chapter of the story was a starting point for the conception of a scenic device and a performance improvised by Julie Andrée Tremblay, who performed following some indications that I had previously scripted in a very loose way.

A dressing screen is a piece of furniture made of a number of vertical panels disposed along a broken line, a ***meuble*** (mobile) which is meant to subdivide space, to create more private, isolated spaces. The screen acts as a filter, it protects and hides from the inconveniences of air passing through a room; it shelters one's body from the gaze of others. One's gaze is similar to one's breath. A gaze is a wind projected from the inside towards the outside—towards the world of one's perceptions. The screen is a device that enables one to escape the gaze of others in order to undress oneself—to strip naked. We may ask who is really becoming naked in that process? Is it the stripper or else, could it be the voyeur? Between the observer and the disrobed subject—in this border that hides while, at the same time, renders visible—the space of desire comes about. The surface of the screen is like a translucent skin stitched with lines that create patterns. The border is blurred, it simultaneously becomes very thin and extremely deep. There are, inside the frames of the panels, representations refering to a space in the story—an imaginary space. This interstitial space unfolds before our eyes but can only take form in our imagination.

In French, *espace* (space) is a hermaphrodite word. The feminine space is

the space between two words in a sentence or the silence between two notes in a musical piece. Sounds and silences create a rhythm—a cycle. The cycle is generated by the repetition of the "same," but the same is always slightly different. Through the performance, architecture is born and dies; an architecture that is bound to be temporary. All we are left with, as Benjamin would say, is a pile of *debris*.

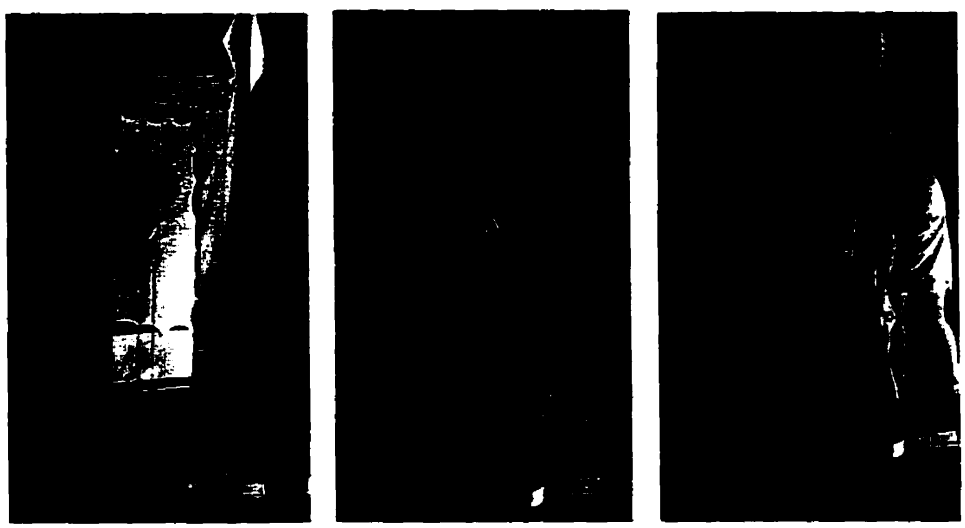
The performance took the form of a ritual in which Alice falls down the rabbit hole and is caught in the long hall. Doors are locked. She enters in the process of transformation that will enable her to escape from that space and enter the garden. What she eats or drinks affect her size, or else, it changes her perception, gradually transforming the surrounding spaces.

FIRST FRAGMENT

Alice is falling in the shaft created by the four panels of the screen following a tumbling and repetitive music.

SECOND FRAGMENT

Alice DRINKS, she forgets, she goes behind the screen and takes off one layer. Alice EATS, she is transformed, she goes behind the screen and takes off another layer. AFTER, Alice goes behind the screen and a frag-

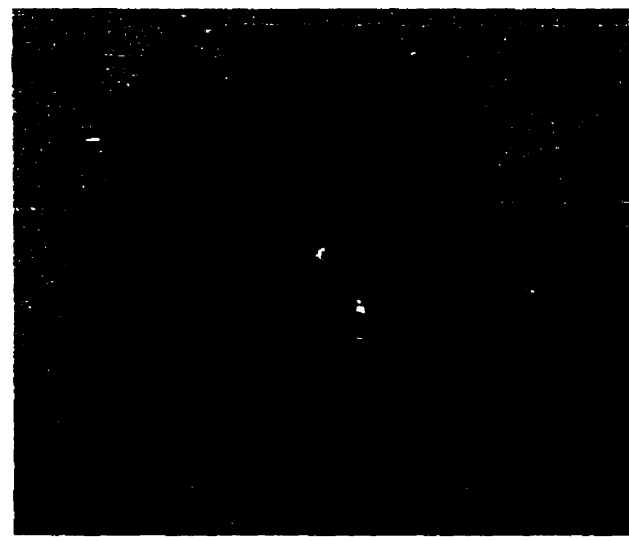


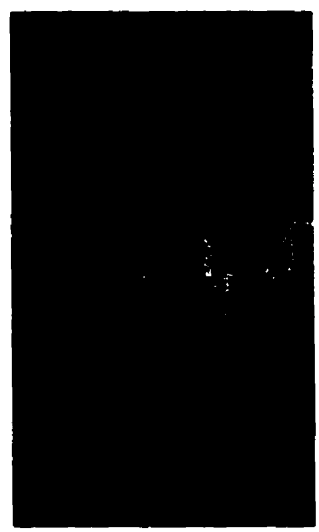
ment of time is torn away. MEANWHILE, Alice goes behind the screen and a little time flies. Alice is almost completely undressed.

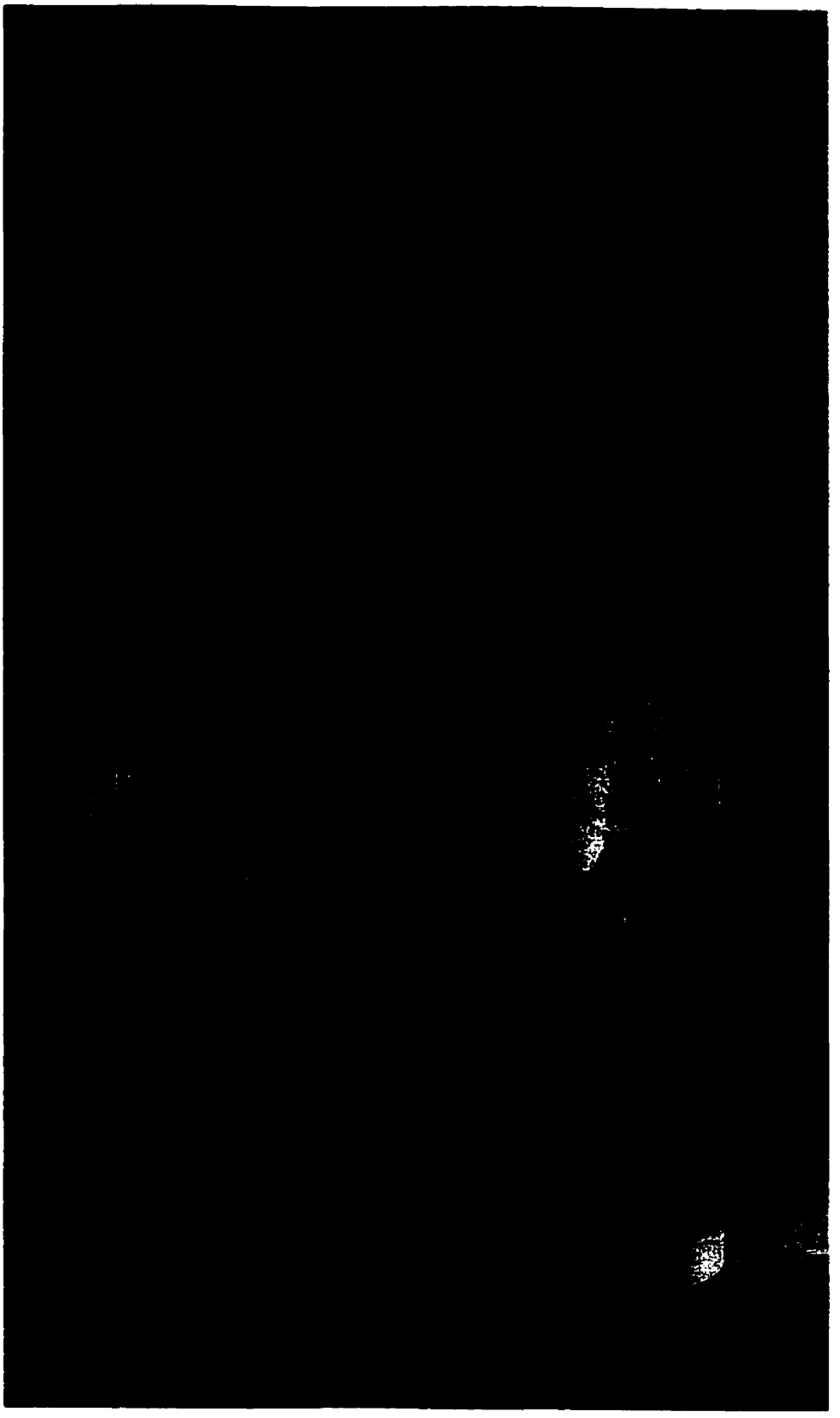
THIRD FRAGMENT

THEN, Alice reaches the key (it is a fruit: the apple). She eats the apple. It is actually THERE that HERE and NOW coincide and that the border is crossed. The screen folds backward, the inside becomes the outside.

The END







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