

A NEW CONSTELLATION

By Marco Meneguzzo

We are living at a time characterised by the rapid and on-going dematerialisation of everything around us. At the same time, we are witnessing the growth of virtual spaces, which are becoming domestic, frequentable and not exclusively visible.

Carlo Bernardini has been aware of this for a long time, and his intention is to use the traditionally least tangible element, light, to construct, and indeed to 'reveal', spaces which would otherwise not only be invisible, but would not even exist. This is not the moment for philosophical, historical and transcendental disquisitions on the subject of light, dealt with in more exhaustive writings on Bernardini's work, which we can only mention here.

We shall limit ourselves to the actual experience of 'crossing the threshold', considering the sensations that almost all passengers passing through Malpensa feel when faced with this work of Light Art.

Hopefully, the written word can capture and clarify these sensations, without destroying the magic that is renewed whenever the human eye serves the mind in constructing spaces that do not exist, in seeing things that are simply not there in a material sense. And yet, Bernardini is not an illusionist: he does not set out to create illusions, which is tantamount to deceiving, but to sharpen our senses, making us aware, if only for a moment, of the amazing constructive power of the human mind.

In particular, the airport's Magic Threshold, a place of semi-darkness, is intended to create a moment's pause, brief but nonetheless effective, thanks to the penumbra that simulates the advancing dusk, night falling with its silence and cessation of activity. This room, then, is not just a space, but also a time: a time for reflection, for untroubled thought, rather like gazing at a starry sky in summertime. The room simulates night-time, even in broad daylight.

Bernardini, who is used to working on a site-specific basis and had a choice of two possible venues, opted for a simple solution in realising his project: three trapezoidal elements, shifting and changing shape, as if accompanying passengers towards the boarding gate. And this is where it all begins. Here are triggered the many sensations that pile up in passengers' minds during those few seconds as they pass through, often in a hurry. It is of course a privilege of the visual arts that they can deliver all possible sensations simultaneously to the human mind, while it is the task of criticism to disentangle this complex of sensations in order to identify and examine them. And yet, the reader – or those crossing the Malpensa Threshold – must know that the incomparable perception of something different derives from the whole, from the simultaneous multiplicity of the vision, which is a blend of memory, instinct and culture.

So, what do we see when we observe this luminous design in the darkness of the Malpensa Threshold? There is a degree of bewilderment, at first, because the darkness prevents us from understanding whether this is something three-dimensional, or rather is a flat design of some kind, composed of luminous straight lines on a surface. It is the mind that decides, and opts for three-dimensionality, the depth of binocular vision. But to some extent this choice is due to deep-rooted Western history: here, Renaissance perspective, laid down in memory, is claiming its due, the habit of processing two dimensions into three, and therefore seeing the figures in space, rather than on a flat surface (a statistical survey involving oriental visitors might reveal whether this habit of seeing in three dimensions is exclusively Western). What is happening, then, is a spatial transfer that approaches and distances itself, as when you leaf through an exercise book. And this makes the space created by Bernardini real, exactly like the space experienced by the passing passenger: if the viewer is in a three-dimensional space – in the famous Newtonian 'box' –, then the thing he is looking at, and which is located inside the same 'box', must necessarily be three-dimensional, so as not to contradict the sense of standardisation that provides the observer with a good degree of reassurance.

In this sense, the security of a standardised vision, of a unity between observer, object observed and the space in which they are both located, trumps the rule whereby we tend to see in terms of the most simple form of spatial organisation.

Whether the aptitude to do so is a physiological law or derives rather from a deep-rooted cultural tradition is still to be determined (and that is hardly Bernardini's responsibility!). But this definition of space, its geometrical quality made visible – the installation is called "Invisible Dimensions" – touches other points hidden in the depths of perception, but which come to the light in terms of feeling, in a poetic way.

The Malpensa Threshold has been compared to an artificial night, which forces us to reflect, to let our thoughts flow, and the first of these thoughts soars upwards, towards the stars.

Bernardini's installation, then, is not a starry heaven, but the 'design' of a constellation as yet unknown to us.

In other words, when human beings constructed their starry heavens, recognising for example Orion or the Great Bear by 'joining up points of light' in an absolutely arbitrary way, they constructed a map of the sky in their own image and likeness, useful for establishing one's own position, but theoretically absurd in establishing correlations between stars that might well be hundreds of light years distant one from the other, and located in such cosmic depths as to be as to be connected only by a time measurement (the light-year).

In short, the Newtonian 'box' that applies to 'human space' is absolutely inadequate for the universe as a whole. And yet this is how we behave: we bend the universe to the dimension of our embrace, to the capacity of our eyes, to our stories and myths.

We do the same with Bernardini's light installation, which thereby becomes a new constellation in a very domestic

firmament, traversed in a matter of seconds, and an example of how, presumptuous as we are, we cannot refrain from placing ourselves at the centre in our perceptions of the universe.

May 2016

INVISIBLE DIMENSIONS AT THE PORTA DI MILANO **Relationships between art and architecture in ambient space**

by Isa Helena Tiburcio

The value added to ambient space by innovative research in the field of art, architecture and design can bring about an improvement in people's quality of life.

The Porta di Milano exhibition area at Malpensa airport, permeated by the colour black and referred to as the 'Magic Threshold' by the architects who designed it, together with Carlo Bernardini's Light Art operation "Invisible Dimensions", is an example of how forms and languages in architecture, design and visual art are closely related and complementary, revolving one around the other like magnetic poles in an interplay of attraction and compensation.

The functional elements encompassing human life, the places in which public and private life takes place, have undergone great changes over the last hundred years.

Historically, beginning with the transformations brought about by the avant-garde movements in art, the space surrounding a work or object has assumed ever-increasing importance in conceptions in the fields of art, architecture and design.

Just as pictures began to break out of their 'frames', i.e. their defined limits, so sculpture started to lose the idea of 'own volume', moving towards what has come to be referred to as 'installation'.

At the same time, architecture has broken down the barriers between internal and external, public and private space, creating semi-public and semi-private spaces with more diversified programmes, while design has shifted its initial interest in generating products, communication devices and services, towards processes and the tools and methods involved in them.

At present, in public space, the needs of users are manifested through a need for change on the basis of their effective demands and aspirations. The main emphasis is on the possibility of intervening, participating and creating more liveable conditions in the urban context.

In public or private spaces mediated by design, such as the Porta di Milano at Malpensa, the idea of finding the intersections that may suddenly and unexpectedly break into daily life at the perceptual level arises through light and the synergies it creates.

Light is a unifying element, essential in expressing possibilities for exploration on the frontiers between our perception of reality and our imagination.

As a catalyst in the relationship between human beings and space, and as an incorporeal medium, light can give a fluid appearance to tangible things, can dematerialise and physically traverse volumes and surfaces, and can shape and permeate objects.

By analysing the functionality and ongoing transformation of space itself, we can look more deeply and understand how light can suggest new ideas and dimensions, including relations between the formal and informal city, the centre and the periphery, which often appear to be characterised by conflicts or denials.

In the context of the exploratory activity fostered by Light Art installations, the methods, mechanisms, strategies and processes used to understand how innovative developments can be introduced to urban space focus on the surroundings of the work as an environmental project designed to transform a place.

One of the new realities in urban areas is the rehabilitation of public space, where all too often there has been a lack of maturity in tackling art and design operations as potential allies in constructing a high-quality environment.

The current phase of the great changes affecting the contemporary city, above all with regard to the issues of fragmentation, chaos, globalisation, flows and network connections, offers new opportunities for experimentation and innovation deriving from technology, which has a crucial role to play in this process, facilitating the quick and flexible sharing of information, and a broader synergy between architecture and art in the planning and development of urban space. In this sense, synergies between architecture and art provide a significant opportunity to give public space the innovative character it needs to face up to the transformation of the city.

Innovative intervention in public spaces may generate active, changeable and visually attractive places for different types of user, stimulating the transformation inherent in the constant change in the urban condition of the contemporary city. This change in current reality is also manifested in planning culture; the planning process is becoming more elastic, changing as a result of greater flexibility. Whereas it was previously based on a search for definitive solutions, it

has acquired openness and great potential for stimulating people to interact differently with their environment. The user can thus experience urban space with “inputs” different from the possibilities suggested by the author of the project.

The logic of perceptual transformation, the possibility of seeing the many and various aspects of reality from a different point of view, is typical of Light Art and therefore of Bernardini’s work. The mobility and perceptual mutability induced by light and the fibre-optic form create, at the imaginative and visionary level, the phenomenon of transformation that causes visitors to interact with the venue. It is in this sense that his work imparts to the Malpensa air terminal, known as the Porta di Milano (Milan gateway) or Magic Threshold – the point at which the city symbolically welcomes travellers – the value added to that already defined in the project.

Such communication is in fact the objective that contemporary approaches to environmental and urban art seek to achieve, leading the user into the space generated by the idea, and then constituted by the work of art.

Artistic interventions thus have an analogical relationship with the local area and environment, based on harmony or contrast, generating in the perception of visitors aspects that are apparently paradoxical, because they are unexpected.

The synergies created are sometimes due to the perceptual unity of the whole, which may favour an agreeable relationship with the social environment. Or they may be connected to an interplay of contrasting elements, and the compensation that occurs implicitly in this type of relationship between place and work of art.

Thus it is that, on the way between “black” and “light”, the Magic Threshold and Bernardini’s “Invisible Dimensions” lead us into a visual organism that defines the environment – the space in which we pass from ‘World’ to ‘City’ – opening up before us a route into a new dynamic and perceptual transformation of place.

May 2016

CARLO BERNARDINI

by Teixeira Coelho

In the late of 20th century, abstract painting experienced a variation in the form of painting color fields, which were works organized with large areas on canvas, marked by the same – though not necessarily uniform – color but, in any case, not made of layers of different of colors as in abstract expressionism. From this starting point, we can say that Carlo Bernardini works with/outlines *fields of light* that, paradoxically, have no light inside – only outlined edges, as in a geometric drawing on a paper sheet, as in a geometric drawing on a paper sheet.

The illuminated lines define the fields on a given reality – and yet, even though these fields are “dark”, without any light, it is as if they were full of an invisible matter that overlaps the matter of the place that support them. In this sense, Carlo Bernardini is an artist of minimalist light, despite the fact that this statement will be corrected as follows. Minimalist because, as he warns, one problem with technology is the propensity of those who use it to become rhetorical, excessive and baroque. His field of light, conversely, are simple, synthetic, pure, minimal. On the other hand, as he himself prefers, Carlo Bernardini is not a minimalist as he seeks to create works that display “visual bodies” in which one can observe perceptive juxtapositions of both static and dynamic nature. In fact, his fields of light have the property of – as in optical exercises that cause the eye to strain after looking at a certain image, and automatically turn to the next image around – show the “bottom” of these fields constituted by the reality upon which light makes its drawing, and the path made by light lines around the field.

These fields of light are what Carlo Bernardini defines as permeable or navigable spaces – immersive environments in which the viewer can eventually be inserted but, above all, so it is as if somehow annuls the visual state on which the work intervenes, then undoes the very physicality of that space and finally enables the creation of an imaginary space by the observer, who is open to not merely consume the work with a quick, inattentive glance but to explore the proposed picture with time and tranquility. Architecture, which thus serves as a support for the work of light, abandons

it traditional function to refresh the perception that no longer sees the space built but that calmly and virtually rebuilds it and promotes it to another perceptual reality.

As the artist himself notes, the biggest transformation promoted by contemporary art is not so much regarding new materials or new languages but the suspension (or redefinition) of boundaries between a canvas and its frame, or a sculpture and its volume or architecture and its edges.

Carlo Bernardini's field of light impose new limits to the architectural space under intervention and, at the same time, transgresses all of them.

Antithesis of architecture for its immateriality, which is at the same time a condition for architecture's perceptual existence, the light here is labile comment on a work that is intended to last: a clash of intentions and meanings is established.

September 2015

CARLO BERNARDINI: SPACES DISEGNET BY LIGHT

by Bruno Corà

If one was to trace a theoretical, conceptual though not necessarily coherent path, but – what is more interesting – an implicit path, in the sense of issues, preceding the work of Carlo Bernardini, one could not ignore a number of experiences which have brought intensely meaningful results through artistic experimentation during the course of the twentieth century. The dimensions touched by everyone who has dealt with the element of light – first and foremost the light of the space-time dimension –, have been lastingly tied to both the quality of the material experiences and the processes of perception, feeling and emotion provoked by the different types of phenomenology appearing before the eyes of the beholder.

These, along with the amazing developments introduced by photography and later by film, encouraged by the climate created by Futurist and Constructivist action in both Italy and the Soviet Union, as well as the experiments of Laszlo Moholy-Nagy, especially during his years at the Bauhaus and later, represent one of the cornerstones of Bernardini's work.

From the 1920's to 1935, Moholy-Nagy conducted visual experiments with light, using photography and what is known as *light painting*. His works, in which a 'space modulator' relied on light to make its presence more dynamic, are the founding works for every successive experience based on the use of light in space. «'Painting with light' is an authentic chapter in artistic utopias» [1], wrote Moholy-Nagy, some time after he established his theories in *The New Vision* (1930); he also wrote: «The progressive artist who is battling with his traditional element, pigment, feels that a transition is in the making, a shift from pigment to light (...) But this is not yet the era of light painting. It is merely the time of *advertising* with light, exploited for publicity, to capture the eye (...) We have not yet institutionalized space-time in our physical universe (...) Light is still used without a design as in the crossfire of spotlights, of projections into the sky, of the extravagance of neon lighting. However the existence of this form of light is a promise for the future.» [2]

It's true that the Moholy-Nagy's thoughts and experiences were pioneering, but it was not long before Lucio Fontana confirmed his prophetic intuition. In his *Concetto Spaziale* (1951), 'a fluorescent arabesque' about 200 meters long shown at the XI Triennale in Milan (1951), Fontana visualized the very first neon spatial environment. As Fontana himself declared, it evoked 'the trail of a flashlight waved through the air'. [3]

The influence of Fontana's experience on his contemporary and successive generations is evident in the use of electric or neon light in the work of artists such as Nauman, Merz, Calzolari, Kosuth, Flavin and others. But a pure, extremely rigorous statement that came after Fontana may be found in the work of Francesco Lo Savio, who in only five years – from 1958 to 1963 – developed an exemplary and unparalleled paradigm of aesthetic and artistic reflection around the

concept of 'space-light', with works in which light is the source of dreams, pursued with intense and dramatic dedication. Among Lo Savio's early definitions of light, there is one, a breathtaking conception that appears in the catalogue of his exhibition at the Galleria d'Arte Selecta in Rome (January 1960): «For me light is not the consequence of an image, but the sum of several images in a continuous evolutionary movement. The idea of light as pure and simple observation would mean nothing were it not for its direct participation in the inception of life in its essential dynamism. Every aspect of its being is related to something else, then it follows one last direction that leads it to where it can lose the sense of what it is and simply drift through the void. This drifting, which in itself is nothing, is simply the way it appears: the image of an almost impossible reality». [4]

These three cornerstones might be sufficient to provide the foundation for Bernardini's entire speculation, had he not personally, on several occasions, alluded to the work of Olafur Eliasson as a dialectical reference which is however contemporary to his own work.

But how is Bernardini's work different and distinguished from the above-mentioned precursory experiences?

One of the most amazing aspects of his work is the result of an image that, built by means of lighting devices (optic fibres) and based on their properties, creates a sense of detachment from reality in the space, an incorporeal yet visible entity that exercises both a designing yet virtual effect on the space. If, as Fontana diagnosed, it is always the means that revolutionizes artistic language, there is no doubt that the way Bernardini uses optic fibre can lead to extremely interesting developments. The examples created to date seem to want to force the medium and to address a more advanced conception of geometry which starts from a series of points of observation to diversify, change, dissolve or multiply in the perception of the individual.

It was a common opinion among the best of artists in the Sixties that the use of technology in their works should not aim at objectives that would compete with scientific or technological advancement. They were convinced that anyone who sought to challenge their more advanced results was irremediably destined to fall short because science and technology, on their own terrain, were unbeatable. In fact, upon further consideration, the terrain of art was necessarily different, considering that the principles underlying its disciplinary motivations are fundamentally different and often opposed to the guiding principles of technology. In addition, it is inconceivable in art to rely on the criteria of methodological replication and objective verification which characterize scientific phenomenology. Discipline and science do not necessarily coincide, they can sometimes be completely divergent if their objectives are functionality in science and wonder or revelation in art.

In this sense, Bernardini appears to work within the domain of advanced technology with an awareness and a mind open to speculation that are both ingenious and effective; he seems to use optic fibres at an "intuitive" and not a merely utilitarian level to achieve results in the field of visual arts. It is obvious that the processes to which he conforms his actions are those of drawing, with the purpose of creating an original, multi-dimensional spatial quality, free of traditional supports such as canvas or paper; a *ductus* unencumbered by the material entity, intangible and fluid thanks to the effect of light; a drawing that comes as close as possible to the idea and the mental perception of space rather than its true consistency. In Bernardini's work, in the polygonal triangulations of lines of light that intersect the space to configure its spatial quality, there is no outside or inside with respect to their extremities, intersections or soaring apices. In fact, there is nothing more than an epiphanic luminous designation of the space without a material definition for it.

Perhaps for these reasons, his work, upon closer observation, seems to reveal an additional quality: the beginning of a transmutation of the elementary data he uses which, properly developed, liberate *consequences inappropriate* to their apparent premises.

And this is a terrain for wonder, which Bernardini exploits, which art has always flaunted and offered to those who hold it in high esteem.

[1] - L. Moholy-Nagy, *Vision in motion*, Paul Theobald and Company, Chicago, 1969, p. 163.

[2] - Ibid., p. 166.

[3] - L. Fontana, in Guido Ballo, *Lucio Fontana*, catalogue of the exhibition held at the Sala Comunale d'arte contemporanea, City of Rimini, June 30 – September 30 1982, p. 22.

[4] - F. Lo Savio, catalogue of the Galleria d'arte Selecta, Rome, January 1960, reprinted in in the catalogue of the exhibition held by Francesco Lo Savio – Centro per l'arte Contemporanea L. Pecci, curated by B. Corà, Prato, February 22 – May 31 2004, p. 126.

CARLO BERNARDINI

by Giorgio Verzotti

According to a happy insight of theoretician Sarat Maharaj, the art of the centuries gone by appealed to the senses, while 20th-century art addressed the intellect. Manifesting itself in form and colour, traditional art is *pleasing*, its effect lies in its beauty, while contemporary art *interests*, it affirms itself through the thought it expresses. Formal values become secondary, at least in the more radical researches that mark a period and leave their mark on it, even in terms of taste. Of course, with the seductive force of beauty the art of the past reached through to thought, touched on the eidetic sphere, raised issues of a mental order and was, in short, a “mental phenomenon”.

Contemporary art is such from the outset: placing “the spectator in the centre of the picture” is not a matter of taste, it is an ideological programme, immediately ethical in the strict sense.

The problem of how to implement the programme comes as consequence; it does not precede the project, as it did in the traditional canon. With no more canons – they are all to be reconstituted – the formal value is given as a hypothesis to verify in action, to be reconquered once the criteria of taste are defined.

Marcel Duchamp did not start from a formal value for his ready-mades; indeed, the objects he chose were precisely those that struck him least from the formal point of view, were least suggestive of mental associations of any kind, and least of all did they raise questions of new “good taste”. It is not easy for such a common object to prove so alien, so indifferent. And yet contemporary art springs from such indifference – or at least its most radical, most pregnant of the new, the future.

And yet contemporary art is never too Hegelian. According pre-eminence to the conceptual level of artistic operations does not mean confirming the hierarchies on which classical thought rests, and which give priority to sight, being the sense most directly connected with thought, with the spirit, and least involved in the body.

Contemporary art is marked out precisely by its redefinition of rapport between spirit and body, treating the latter as something repressed that is to be endowed with voice once again, as a means of knowledge to be inhibited no further. Only, the body is not given absolute status, but set in a dialectical relationship with its opposite – pure thought, the dematerialisation it bears within itself, as metaphor of self and as its primary practice.

Environmental art finds its motivation starting from this dialectic, re-positioning the two possibilities of knowledge as perception, from essentially visual-mental, becomes psychophysical, involving the senses without creating hierarchic relations between them – a perspective brought even closer by the artists whose work in the environment involves light. How can the spectator have felt gazing up at Lucio Fontana’s neon swirls in the Triennale of 1951? What sensations are experienced entering a hall where works by Dan Flavin are displayed, or “crossing through” an installation by James Turrell?

These questions and reflections help sharpen the focus on the work of Carlo Bernardini, who seems to lead to new consequences the path opened up by these significant precedents. The artist starts out from fairly complex theoretical and methodological considerations and, taking his position in the field of sculpture, immediately raises matters of light and shade and their capacity to occupy space. I am not referring to the body of the work, its *pondus*, but rather to light and shade as the two extremes of a dialectic where the middle term is not considered. Observing his sculptures we can in fact register the arrival point of a language that reduces to the very limit of sculptural presence: filiform structures in steel, glowing screens, transparent slabs of Plexiglas – the least that can be said is that empty spaces predominate over solidity to the point of virtually annihilating it.

Naturally, so much negation (of traditional attributes) is matched by a distinctly positive impulse, asserting a presence, a source of action – namely light. The slender, deft metal structures accompanying optic fibres in a sort of positive-negative rapport which, in some cases, becomes division of functions: the steel is seen by day, the optic fibre by night. In most cases the optic fibres alone take over the space: the work lives entirely on the relationship between luminous line, design in light, perfectly geometrical and so self-evident in its constructive links, and the space housing it. In this reciprocal relationship space becomes condition for the visibility of light and vice versa, the design in light takes on configuration responding to the structural characteristics of the space (which may contain objects that interact with the

rays of light), space being charged with the straight, powerfully energetic lines crossing it ceaselessly to trace out virtual volumes. The mind inevitably turns to the “linee andamentali” of Balla, and from here to the genealogy thus generated: Fontana’s neon, as we have already seen, the “neons” of Mario Merz that transfix objects – all this, as we have seen, “dematerialized”: light and shade, empty space, scant materials able to thin out almost to the point of eluding perception. And yet Bernardini is never too Hegelian: sight as threshold opening on pure thought comes short of axiomatic triumph.

The body is topicalized with the same force in the work of Bernardini, yet it does not belong to the work. The role of physicality is delegated to the spectator, it is his/her body the work calls upon as the element that completes it, or rather founds it upon the sense relations it activates with space – space that is not conceived of as abstract but in phenomenological terms, it is environment, lived space (the artists call it *permeable* space). The spectator’s body has not only the role of moving and perceiving, but also, with its movements, of transforming the work, which changes appearance according to the point of observation. Like Paul Klee, Bernardini (and all who work in this area) can say that his work postulates a *drifting* viewpoint, moved by the observer who, moving to observe, modifies the work in its most essential aspect, its significant relationships with the environment. Thus between light and shade there is in fact an intermediate element in action: the body of the sculpture is multiplied in the infinite points of observation, in the infinite ways the observer has of relating to it.

April 2008

THE OTHER SIDE. THE PERCEPTION OF THE INVISIBLE AND THE IMMATERIAL

by Luciano Caramel

To focus on “the other side” of reality, the invisible, the immaterial, light, void, as elusive as it is charged, in the intangible presence of absence, is one of the most significant and often travelled experimental, as well as thematic, routes. The celebrated oriental route, related to a millenary tradition and a philosophical and spiritual approach that contemplates a comprehensive unity of the whole, in dialectic with the physical determination of a fullness revealed by void. And the western route, starting with the late nineteenth-century Symbolist movement, as far as contemporary art is concerned. And in the interference between the two directions, centripetal and centrifugal, between delving within and perception, and an exciting cultural conjunction with art, literature, music, with the science of vision and psychology. In a significant bond between multiple layers, problematic and methodological, all the way to occultism, and a privileged interest in light as phenomenon and essence, physical and spiritual fact. And with the establishment of painting and sculpture as “symbolic form”, which increased between the nineteenth and twentieth centuries.

The “other side” of Carlo Bernardini not only is unlike, obviously, the obscure and psychologically alarming *Die anderle Zeite*, the “other side” of Alfred Kubin, nor is it the ‘other side’ of expressionism, also elated, or of surrealism, in the psychoanalytical key that was already implicit in Kubin. One must refer rather to a scientific-analytical direction, that includes positivist elements as well, but in an original context. Even when compared to other artists who privilege light in their work as he does, from László Moholy-Nagy and Schöffer to Fontana or Gianni Colombo. All of which appears clear from Bernardini’s theoretical writings: starting in 1997, when he began this exploration, in his essay on the *Division of Visual Unity* (Rome, Stampa Alternativa) he writes that “shadow and light, though immaterial, are visible. Shadow is the dark projection of things. It occupies the other side of a body. It increases the perception of existence, though it remains fleeting, impossible to grasp. The other side is located beyond the borders of existence, like an additional aspect or dimension, it is the second visual condition of what we are observing”. And further: “Light materializes vision, and what in reality is as immaterial as a shadow, beyond the boundaries of appearance can become virtual or deceptive like a reflected beam. In the perceptive process given by the distinction between the image of thought and that of reality, the relationship of projection between the visible and invisible is taken both as a sort of transmigration of the palpable perception of things, and as a sort of demolition of the concept of the unitary nature of the work”. Hence “the operative reasons for the division of visual unity” from which the title of the book is derived, “are based on the division between the primary visual condition, which lies outside the work and the visual condition, plastic or structural, that lies within it. Thus forming two experimental apparatuses, which are the mirror image of one another”.

This primary condition of unity and division characterizes the work of Bernardini in an innovative manner, not only as compared with the minimalism of Dan Flavin or the conceptual lighting works of James Turrel, but with the entire tradition of experimenting with light and its constructive and expressive potential, which conjugates a structural character and a perceptive flagrancy on the scale of the virtual, with the consequences that this entails both within the work, and on its interaction-dialectic with the environment and the user. The artist does aim to physically extend the dynamic experience of seeing in the determined nature of the space and in the psycho-sensorial totality of the onlooker, thus beyond a condition of abstract immobility and stability within a spatial dimension that is animated in time, but implicit, not ongoing. For this reason, Bernardini's constructions and installations in optical fibers and electro-luminescent surfaces refer, though three-dimensionally, not to the machines or circles of true Kineticism and programmed art of the early Sixties, but to the early, virtual experiences of artists and groups who investigated the dynamic potential of sign, color and light around 1960, prevalently in two dimensions.

The results are anything but reductive and allow the problem to be expanded beyond the scientific (or better yet, para-scientific) laboratory, and the experiences to acquire an educational sense. Towards a complete and multidimensional involvement of the spectator, and the full measure of his emotions. Thus adhering to the complexity and extension of visual perception, both physical and mental together, beyond the quality of object and material, though within a real and objective condition. A result that is facilitated by the use of optical fibers, which lack the tangible nature of the neon used in the early Fifties by Fontana, for example, or other lighting gases, though as Bernardini demonstrates, they are appropriate for making luminous structures that are specific, as well as geometrically defined: lines of force in a non-circumscribed active field, associated by the artist to stainless steel elements in many of his works. Like, in this exhibition at the Galleria Milly Pozzi Arte Contemporanea in Como, *Linea di Luce*, 2003, from the series *Divisione dell'unità visiva*: "a sculpture composed of two independent visual units constituted by two distinct sculptures: one in stainless steel visible by day, the other in optical fibers visible by night", as Bernardini wrote in relation to another analogous work, where "the project for 'division' also relies on the perceptive mobility given by the possibility of moving into the sculptures, thus observing both from outside as well as from the space within" (*Progetto di una scultura* 2001, in *Carlo Bernardini*, catalog of the one-man show at the Naviglio Modern Art and the Spaziotemporaneo in Milan, 2003). "The stainless steel structure that is generated by a diamond shape", explains the artist, "where the lines are doubled, creates a multiplication into four triangles and contains within it the second sculpture in optical fibers, which starts out specifically as a primary triangular shape, giving rise in turn to a division of the lines into three diamond-shape forms".

Sculptures then, as the author calls them, but without the weight and spatial volume that have always defined sculpture; they present themselves as immaterial yet visible installations, as *permeable* spaces, according to Bernardini's definition (*Lo spazio permeabile*, catalog of the exhibition at the Galleria Fioretto, Padua 2001), whose origin and development he describes with his usual lucid insight: "A perimeter design, that unifies the internal void, tends to concentrate the maximum force within it. This force may however generate ambivalence, breaking through the boundaries of the interior space of the form. Thus beginning with this ambivalence, from the mutation of one reality into a different reality, the concept of transforming a space that may be walked through, locates the point of view on the brink between two hypothetical positions, one outside, one inside. Between an objectivity seen from the outside and another seen from the inside. The optical overlay between lines that run through it and lines that run along the planes of a space itself can determine, from a precise angle of vision, a two-dimensional visual condition; as it changes volumetrically, it creates forms that mirror one another as soon as you move away from that point. The change can thus release the properties that permeate a place. A space described as 'permeable' can thus be a virtual space that tends to force the limit of the physical space [as in Bernardini's installation at the XX Triennale in Milan, in 2002, for the exhibition "Le città invisibili"]. Or on the contrary tending to enclose a real environment in an illusory volume [like in the installations at the Chiostrì di San Domenico in Reggio Emilia, in the spaces in front of Palazzo della Ragione in Padua or in Rome in Piazza del Campidoglio, respectively in 1999, 2000 and 2003]. Each seeks to break through to the inside of the other. And it is here that the eye's perception may feel called upon to search for a line of flight across the boundaries of a form. The idea of a permeable space thus becomes a design to transform the coordinates of a physical place. If the line that defines it apparently gathers both the volume and the void, it can also overturn those coordinates itself, putting the first in the place of the second and vice versa. It's as if the volume effaced itself into a plane dimension, and the void stood as the fulcrum of an illusory dimension. A sort of space within space".

THE CONDITION IMPLICIT IN BERNARDINI'S STRUCTURAL LIGHT WORKS

by Enrico Crispolti

Introducing work as strikingly singular as Carlo Bernardini's, and as distinctly original within the current research scene, entails addressing a number of essential questions to start with. The first, I believe, is the presumed departure represented by the use of optic fibre – the structural light *medium* he has used since 1996 – from the modern tradition of using neon, which Lucio Fontana in particular, in the early 1950's, carried to the dimension of space-sign lighting possibilities.

In fact, the use of optic fibre is by no means a direct development, a medium outcome of the use of neon; indeed, in some respects it turns away from this specific heritage, but at the same time asserts itself as a further, new phase in the operational possibilities of light-sign within a spatial context – from the dimension of the work-space to that of the outside space, the urban environment. Basically, I think we may say that neon offers the possibility of forms of cursive writing in light, whereas optic fibre offers perspectives of luminous graphic structuring.

While neon evokes a distinctly physical quality as the material of light, it is also mental, as in the case of Fontana's free spatial graphics in the 1950s and again in the early 1960s, or the cursive qualities of Bruce Nauman's luminous offerings, the solid structural substance presented by Dan Flavin, or again the luminous writing which Mario Merz proposed in complementary "poor", but highly significant terms in the 1960s and 1970s, not to mention the chromatically variegated structured writing produced by Maurizio Nannucci between the 1980s and the new millennium. Mental it is, but retaining a dimension of bodily substance, light as volume and sign, to be appreciated as physically present. On the other hand, optic fibre, as is the case with the "luminousystems" created by Bernardini in his luminously configured "permeable spaces", takes on an ascetic essentiality that, as it were, refines away the sense data of the graphic-luminous sign, restoring it in perceptual but essentially mental terms – devoid of the luminous matter of the senses, almost alien to it.

Thus working with optic fibre is not like working in neon, nor does the former descend from the latter or connect with it except as another stage in a process of converting into essentiality the luminous sign of the spatial graphic structure of implicit environmental dialogue at the end of a path conceived both in extension – configuration of an intervention in terms of environmental capacity – and in compaction, constituting a sculptural, spatially open, penetrated presence.

The choice of the medium clearly reflects the need to configure a communicative construct. And if Bernardini uses optic fibre rather than neon it is on account of his – at least implicit – wish to create a spatial structure in terms of light-script, able to weave the constructional web of complex geometrical perspectives (in any case resting more on a Euclidean tradition than on heady fractal extremes).

The second question to address when introducing Bernardini's work is understanding the constructive structural orientation of spatial commensuration that his works offer. The non-cursive but, on the contrary, rectilinear nature of the luminous sign that he creates generates structural light patterns whose triangulations actually constitute an alternative structural perception within the given environments (be they open or closed), thereby transforming their perceptive and configurational appearance.

There is a logical premise to his work although the definitive outcome seems to be characterized by a very particular lyrical accent, more like lyrical wonder. Paradoxically, his intent turns out to be experimentally deductive, because it resolves into a structural light pattern that establishes an alternative virtual perceptive dimension within the spatial context, a different order of concern, more complex, more directed, more dynamically significant. But order nevertheless, not an open hypothetical flight of imagination, not a heuristic exploration of and in space.

Bernardini starts with the idea of a dynamically ordering capability, of constructing a hypothesis for modification by defining a process to structure a virtual volume. He works at a spatial level as he builds structural light patterns that offer various possibilities for a dynamic ordering of space, with other angulations, and even triangulations and perspectives.

Through this new dynamic structural order, Bernardini makes a spectacular show of other possible and feasible spatial virtualities, of a potentially different condition of space in the environment; he draws them ingeniously and subtly in the

given space with a straight light-sign. In this way, Bernardini constructs new formal spatial virtual entities; and he creates further possible alternative spatial conditions both indoors, at the XX Triennale di Milano in 2002, or in the Museo Passo Imperiale in Rio de Janeiro, or in 2003 in Spazio Como; and outdoors in Reggio Emilia at the Cloisters of San Domenico in 1999, or in Padua, in front of the Palazzo della Ragione in 2000; and he transforms these formal spatial entities into a plastic virtual construction configured by linear orderly light patterns in space.

Two operative perspectives therefore open up in his art, both of which Bernardini has been working on in recent years.

The first involves the possibility, each time, of constituting a new environment, diverging and transforming the static experience of the given space by the subtly peremptory introduction of a virtual linear light structure, intimately dynamic in the reflection of its many internal perspective triangulations; I might even say the complex course of its own internal narrative of spatial geometric commensurations. And this virtual linear light structure obviously opens new possibilities for collaborative coexistence within the specific area of architectural planning, in a possible replacement of spatial environmental coordinates with more dynamic, more problematic and even more inquisitive ones, within the limits of their assertive capacity. These patterns in outdoor spaces can construct new virtual structural possibilities.

The second, a new practice of plastic installations, light sculptures, it too ensuring a fundamental spatial response. It is represented by his peculiar "sculptureinstallations", that act in space as rigorous structural entities, where an evidently equally straight metal element acts in strict dialogue with the structural light patterns, using taut optic fibres. Whereas the spatial structural linear light pattern tends to build a changing environmental diversity, the plastic structure of his "sculptureinstallations" delineates within them a virtual spatial micro-situation constituted by the structural components, whether they are made of light or metal patterns.

It is in this context, in his own way, that Bernardini furthers the discussion - essential for one aspect of the experimentation developed originally by the plastic arts of the late twentieth century and beyond, in particular - concerning the liberation of plastic design from the traditional conditions, especially of volumetric consideration (also pioneered by Fontana himself as early as the 1930's during one phase of his research; and by Alexander Calder at the same time). Bernardini in fact works in terms of permeability and thus of a close spatial dialectic; building linear spatial patterns, rather than plastic volumes.

What is the relationship, as far as his "luminousystems" are concerned, between the virtual spatial light constructions and his "sculptureinstallations"? I believe, for certain, that the latter will not develop into objects but rather into installations: and could they not therefore become, even at an urban spatial level, something similar to great environmental structures? I mean, in the way that Nicolas Schoeffler imagined them in Paris in the 1950s, as highly structured formal constructions, whose life relied on a dynamic projection of light; designing a powerful presence on the urban sky-line.

This is a question that Bernardini's current work leaves profitably open.

November 2005

LO SPAZIO PERMEABILE

by Achille Perilli

Carlo Bernardini is an acrobat, moving through space with light as a trapeze artist uses cords to trace his path through the air. He works to create a dynamic image differing from the configurations achieved in most contemporary research, alternating space with constant change, shifting from without to within or vice-versa. Perception multiplies the forms, much like the image of Rita Hayworth in the fun-fair mirrors of Orson Welles' "Lady from Shanghai". Reality becomes uncertain, fixed relations of form giving way to constant distortions of the image. To make a rather bold comparison, in "Las Meninas" Velasquez places himself at the centre of vision and outside space, making any "one" interpretation impossible. Unlike artists who trace their lineage back to Duchamp or Warhol, Bernardini has the futurists lingering in his memory as forerunners. Long ago Boccioni proclaimed in the 1912 manifesto "Futurist sculpture": "What is created is but a bridge between the exterior sculptural infinite and the interior sculptural infinite; thus the objects never end, but intersect with infinite combinations of sympathy and clashes of aversion." Along diverse paths and in different, relevant manners the modern Italian tradition - that Italian way of standing out even from European culture and outside the conventions and imitations of the American visual approach - finds its way into Bernardini's art. His is a form of

creativity that works on the basis of a code of modifications in space reflecting variants produced by light, far from the static work of Dan Flavin and the various other artists who use the same material but delineate with light images closer in effect to a "Fourteenth-century Madonna". And here we have another component of Italian sculptural art - the use of shade. In fact, space generated with light can be outer or inner, not only static vision but a complex of transitions and perceptions susceptible to manifold interrelating interpretations. In that great blackness within or without the rigidity of the environment that contains it, arrested in the fixed or variable points that are the infinite range of paths both physical and mental, the elastic space of the structure works through ambiguities and diverse situations and modes to bring forth the hidden face of the moon - shadow. With his metaphysical grin emerges De Chirico, father of Italian modern painting and a wizard with shade and shadow, not only as iconographical elements but above all taking space beyond its limits, stretching perspective to create the enigma of form and nothingness. When an artist talks about his poetics, considerations and thoughts will emerge that cast light on the alchemic process and occult labour that is the creative act: involuntary revelations, sparks and flashes emerge beyond the work, illuminating tracts of that dark, subterranean progress which, like a watercourse through limestone, will bubble to the surface and sink back to the depths of the rock. At times, however, the magma cools down and becomes stone, taking on the aspects and truth of poetry, justifying not so much the fact, object or act as bearing out the truth that is, precisely, the artist's poetry - as, for example, these remarks by Bernardini reveal: "There are only two things that have in themselves a visual but immaterial property approaching this concept: light and shade. Shade can fill out on the surfaces of a physical space or fill the whole volume with darkness, but it cannot cut across it. Thus only light remains."

December 2001

CARLO BERNARDINI: LIGHT AS SPACE FOR THE POSSIBLE

by Silvia Pegoraro

...light coming from I know not where, not seen to come but to be, total source, invades fullness.

Juan Ramón Jiménez

...it was a nowhere of impregnable purity

Wols

According to the art historian and theoretician Hans Sedlmayr, "modern" art, the origin of which he traces to the end of the 19th century, has gone through a sort of *descensus ad inferos*, accompanied by the disappearance of light in its various manifestations, or rather of the rapport with light as transcendence, the mysterious side of light rendered absolute in its adamantine otherness. With this loss light was left devoid of all its metaphysical potential. And yet with excessive darkness there emerges the need for light, which, paradoxically, is reflected in all aspects of western civilisation: no longer metaphysical, no longer aesthetic (even though our cities are aglow with neon and luminous signs and messages shine out with disquieting beauty), light, at the end of its journey, is possibly the element of the most radical anthropological change of the 20th century. In fact, contemporary art has always taken a keen interest in artificial light in its various forms and manifestations. References to it are already to be noted in the early years of the last century, with futurist works asserting the beauty and sensuality of "unnatural" light, bringing in new forms, new significances, but also a personalisation of the rhythms of life. Moholi-Nagy was the first to introduce sources of artificial light in some of his works of the 1920s. Then came a crescendo of experimentation and research, from the light of Wood and the neon arabesques of Fontana to the glowing planetary cartography of Thierry Despond; from Dan Flavin, with the ecstasy of his fluorescence, to Maria Nordman, with her "chaos as light and sound", between laser alchemies and virtual servostructures. Then there were the "psychromies" of Carlos Cruz-Diez, the mobiles, the labyrinths in continuous metamorphosis of lights and colours by Martha Boto, James Turrell with his "Ganzfelder" (total visual fields), Colombo, Cunningham, Kowalsky, Morellet, Mochetti...

On the other hand, the need for light in western culture went as far as identifying light itself (after the decline of the

“aura”) with absolute rational clarity, conceptual exactness, which could even end with the work dissolving in a purely linguistic-verbal option. Science has generated the visibility we anchor on to, but it has also reached through to the infinitesimal core of the subatomic world. Matter, like light, can no longer be represented. The ambiguous world of waves and particles, quanta and fields, *finds no image* but only numerical formalization.

Sedlmayr extended his investigation into the “death of light” with the clinical approach of the anatomist and the nostalgia of the theologian in a text published in 1951, dedicated to interpretation of a brief text by Adalbert Stifter (an author also dear to Heidegger) entitled the *Eclipse of the Sun of 8th July 1842*. According to Sedlmayr’s interpretation, in the history of light we may come upon “phenomena even more important than in the history of space, which from Riegl onwards became the great basic problem in the history of art”[1].

Carlo Bernardini, an extraordinary explorer of the artistic potential of light, moves on a plane that sees convergence of the perceptual component, scientific-experimental research and advanced technology, but also a metaphysical inclination.

The return of light in the art of Carlo Bernardini transforms nostalgia into the abstract space of the possible: a new space whose luminosity re-emerges from the depths of its origins, where light and dark are one. Thus Bernardini arrives at an intriguing and original solution to one of the crucial problems of modern art, which had already loomed up with early Romanticism (above all in Turner and Friedrich), and which resides in transforming space, with all its abstract, metaphorical, existential values from a condition to represent objects into image itself. This is what Lotman defined as “spatial language”: in the art of Bernardini representation *in space* gives way to display *of space* itself.

Starting out from abstract painting where light was identified with shining white cones and, later, with the luminescence of phosphorous, Bernardini then went on to tackle the third dimension, first with steel pipes emerging from the canvas to cast real shadows, then (as from ’96) concentrating on sculpture-installations in stainless steel and optic fibres, OLF and electroluminescent surfaces, perceived by the observer in different ways with different forms according to his/her changing position in space, thus projecting experience into the work itself.

Characterised by “minimalist” rigorousness – with occasional echoes of American minimalism – Bernardini’s work constitutes a stimulating and problematic equilibrium between the classical idea of sculpture and the graphic movement of light – white and rectilinear – which traces out his structures.

Material lines reflecting the lines of luminous energy give rise to spatial rhythms with unlimited scope for variation: architectural structures of light, impalpable but visually incisive, virtual and at the same time asserting presence, evoking an archaic sense of classical severity and at the same time a powerful impulse of curiosity and wonder in quest of the “new” – essential, structurally rigorous works, yet profoundly evocative and poetic.

Graphemes of glistening steel and sharply defined trails of light delineate the eventful essence of “sculpture” consisting of ascending thrusts and oblique dynamism, suspensions and quasi-musical pauses. Forms stirring the silence of the void with infinite vibrations, soaring and shooting up, reaching out ever beyond – instruments tensed towards the unknown, the unknowable, svelte presences able to draw into their aspiration towards the infinite all the space possible; razor-sharp spears and antennae capturing physical and mental energy.

All this arouses a powerful sense of freedom in the spectator. Rigour and emotion combine in a new perceptual dimension, while the rapport with the work is renewed afresh at every step, the gaze constantly drawn to attune to the haptic, tactile-motor senses, to take cognizance of the mystery of space and how it relates with the observer’s body.

As an initial approach, Bernardini’s work might be viewed in terms of continuation and development of the researches in artificial light pioneered by Lucio Fontana between the late 1940s and early 1950s with the use of neon which – as the authoritative critic and historian Enrico Crispolti wrote - opened up for art a new “sign-light-space possibility”. This heritage of Fontana was taken up largely by Op(tical) Art, which set out to stress the optical-perceptual factor on the basis of a structure that, alongside the regularity and rationality of the “programme”, accepted the random, the unforeseen and aleatory that the irrational post-war currents rediscovered, beginning with the Informal. Clearly, Bernardini is in some respects indebted to the *optical* and kinetic, above all in relation to convergence between the structural factor consisting in calculation and rigour and the random factor (the element of chances and unpredictability in the movements of the observer). However, his work is in some respects more complex at the conceptual and poetic level.

In the history of western culture a trail of light weaves metaphysics and theology together: Saint Augustine and Pseudo Dionigi Areopagita, Johannes Scotus Eriugena and Ugo da San Vittore, Bonaventura and Robert Grosseteste. Indeed, the latter gave expression to his thought in series of affirmations that suggest considerable affinities with Carlo

Bernardini's poetics. For the medieval English philosopher, in fact, light is not only the *first* corporeal form of all things but also the element that, spreading along the three dimensions, generates space, which therefore did not precede them in existence:

I believe that the first corporeal form, which some call corporeality, is light. In fact, by its very nature light spreads in all directions (...). The corporeal is that which is necessarily produced by the extension of matter through the three dimensions (...)

Thus corporeality is light itself, or acts in such a way and endows matter with dimensions in that it shares in the nature of light and acts in virtue of it. Actually, however, it is impossible for the first form to have endowed matter with dimensions in virtue of a form posterior to it; thus light is not a form posterior to corporeality, but is corporeality itself. [2]

In the work of Bernardini, too, light irradiated by the structures in optic fibre generates space, just as it lies at the origin of perception of the *void*.

Light also appears as absolute, original substance in one of the books of the Kabbalah, the *Zohar*, and in all the Hebraic philosophy of the Middle Ages.

Enounced in the *Kabbalah* is the mystical-the visionary theory of *zim-zum*, the *creatio ex nihilo*, attributed to the rabbi Isaac Luria di Safed, who lived in the 15th century. *Zim-zum* literally means "contraction", "implosion". It is that infinitely vertical act - let us not forget the vertical soaring thrusts of Bernardini's optical structures - with which *En-Sof* (The *in-finite*, the *deus absconditus* of Hebraic mysticism) recedes from itself and brings about an opening that contracts, *producing void in the Primordial Void*, space in the First Space. Hence the sense of space recalling in some respects what we perceive in contact with the works of Carlo Bernardini: a *void-making*, and a morphogenetic processing of the image as a sort of subtraction, which is situated at the origins of seeing, and of the movement that seeing prompts in the body of the spectator. Recently the artist has pursued his research into "Permeable Spaces", exploring the concept of the transformation of space and the concept and perception of the *void*, which exerts a magnetic force on the observer of his sculpture-installations. Thus Bernardini opens up to perception a *cosmic void*, the indescribable void of black holes, the "no-place" which, together with light, and thus becomes the main subject of his art.

Carlo Bernardini is essentially a "sculptor" since what he addresses is the main problem of sculpture: working material (also light as material) to draw a spatial image from it and situate it in the environment. And so one of the problems that is involved in his art is the conception and realisation of form in relation to a possible place.

The sculptor is a manipulator of spatial realities: he/she manipulates matter, and the space that contains it and to which, in turn it grants existence. Here form is in every case the fruit of a vigorous struggle between empirical space and the mental space of the artist.

The rapport with surrounding space, with the place, and above all with the architectural space (internal or external), is a key point in the poetics of Carlo Bernardini, to the extent, indeed, that every work he creates is to be seen as an environment-work. Bernardini plunges his blades of light into matter and into the architectural forms with which this sculpture-installations interact, giving rise to an event with no limits that transforms the entire image of real space. The world thus re-appears to us as form hewn into space and proposition of a rhythmic alternation that wounds the linear and planar continuity of the world we knew. In a certain sense, the darkness from which his structures of light generates within us new scope for seeing.

Bernardini uses the language of an elegant, penetrating non-Euclidean geometry to plumb depths in the language of poetic emotion: he ties the knots of a subtle play precarious equilibria and magnetisms, play implying a conception of energy as breath of light, fragile appearance of forms, but at the same time able to act as enduring and aggregating value of the spatial components.

In the tremulous restlessness of the lines and in the impregnable lustre of the voids, space receives the subtle, insinuating and irreversible wound of these forms of light: it is constrained to disavow its customary proportions and allow itself to be mirrored in a new image of itself, enigmatic, fascinatingly unresolved.

The artist transmutes the traditional material consistency of the sculptural objects into fragile essence of appearance. He achieves a quasi-magical control of the play in his work bringing to light only phantasmata: slenderness and transparency, verticalities and suspensions.

Re-narrated, space becomes a micro-theatre of the world enshrining the utopia of the gaze, granting survival to the

potential and hidden.

The real architecture, the theatre of all this, becomes possible architecture: the possible architecture inhabits the real architecture as it is fantastic, phantasmal double. The real architecture, undermined by such impalpable yet subversive forms, becomes a niche of inexhaustible possible spaces. Space is an enigma which the art of Carlo Bernardini reformulates. All space comes into play, just as does all the space – virtual and architectural - which receives the artist's structures of light, enters into the structures themselves, turning into emotionally charged place.

Bernardini is able to attune his ear like few others to the breath of the void, the spatial "limbo" that precedes every act of possession or control of space: thus he succeeds in making of sculpture – an art fundamentally involving display of immediate corporeality - into an invisible language.

Space takes on the poetic aspect of a vertiginous threshold, which at times admits passage, at times raises the indestructible veil of otherness and mystery against penetration by the eye.

[1] H. Sedlmayr, *La morte della luce*, tr.it. Rusconi, Milano 1970, p. 26.

[2] Roberto Grossatesta, *Metafisica della luce*, a cura di Pietro Rossi, Rusconi, Milano, 1986 (cors. ns.).

December 2007

LIGHT AS THE MATERIAL OF INVISIBLE SENSES

by Claudio Cerritelli

In recent years Carlo Bernardini's research has turned to the idea of space not as abstract formulation but as vital reality. His approach remains rigorous and analytic, but at the same time sensitive to the emotional components of the dynamic vision. We might say that the artist is working on the categories of space and time from the point of view of drawing pictorial and sculptural form into a broader environmental design, but this is by no means all; the point is above all to see how this plan is developed, and the linguistic components by means of which the image is materialised in the environment. It is therefore also necessary to understand the relationship between theoretical intensions and practical choices, between topological design and the creation of structural hypotheses that assume visibility and perceptive fullness as they become space and time. Bernardini's creative conception begins at the level of the painted surface, where the need emerges to define a certain space with lines of light by structuring material in various ways. With painterly and sculptural sensibility both in play, the artist seeks to extend the perimeter of the image, projecting shadows and applying material techniques (graphite, acrylics and frottage), experimenting with physical marks that tend towards virtual light. In the mid-90s Bernardini realised that the idea of both the surface fixed in the picture-object dimension and the linear structure in the sculptural conception called for a further stage of synthesis, to be brought into play at the installation level. His thoughts turned to the idea of creating a total space where the abstract tensions through which painting and sculpture gauge complex variations in form can be directly reworked in the environment.

From this point of view, Bernardini's work is the most coherent and consequential to be seen among the artists of his generation, liable to run into contradictions in their endeavour to regenerate their art, or casually taking up one new line or another. In the case of Bernardini we are faced with a creative attitude reminiscent of certain artists in the early sixties, exponents of the so-called "programmed" art, who sought to move on from the mythologies of the subjective approach to art as critique of the visual, while exploring the emotions experienced through imagination in the temporal tensions of the works. Actually, in this period it was not so much a matter of creating works as constructing the eye's path, with operations occurring in an ordered flow of clearly defined visual sequences. Clearly, Bernardini's reference is also to the orthogonal lines of light that Gianni Colombo used to evoke the idea of "elastic space" around 1966-67, involving the eye of the observer in the expansive structure of the work, actively entering its environment.

Here that elasticity is absent, but Bernardini's programmed space is born from the complexity of a conception that envisions a line of light connecting various points in the environment with constant variation in the luminous geometrical rhythms. Whether the young Roman artist was conscious of this fundamental precedent or not, his research

has step by step found in a rational design the basis for an expansion of sensorial form, ultimately identifying the mechanisms of construction with the adumbrations of the imagination. Moving on from the dialectic between imagined and real shadows experimented from the early nineties to the present installations in optical fibres, he has very deliberately set out to anchor spatial tensions within the physical framework of the show room, exploiting the possibility of extension along gravitational courses that the line of light itself maps out from one point of the environment to another. Let us see this developed, with a backward glance to 1993 when the idea was of a work of art consisting of two elements set in reciprocal tension - two expressive, communicative worlds coming into contact, attracted by almost impossible magnetism. The artist set on the wall a canvas painted with acrylic where the vibrations of the pigment revealed the emotional content of material memory - albeit of an evanescent material that seems to drift into countless rivulets and disappear. With a procedure we might describe as monochromatic sensitisation of the surface the image takes on its own physiognomic autonomy, prompting the eye to take in the variations in the painted material, the various expanses of white. It seems to settle over a long process of sedimentation, scored with cuts showing a top-downwards movement. As Vittoria Biasi points out, "The artist builds up translucent layers into a white surface, light sinking in while the lines - visible in the dark - expand outwards. The work exists between inner and outer emanations, as if poised between light and shade." Such enhancement of the luminous quality of the painted surface constitutes a physical and mental reality constant in Bernardini's work, even when it is not in itself but seeks exchange with the other, as in this type of work.

Set at two, opposite points of the surface is a structure in the form of an iron rod at an acute angle, apex pointing to the floor to create shadow marks limning out a virtual volume between real and illusory lines. At this stage of research painting and sculpture coexist in a conception relating strictly to the environment, the sense of emptiness materialising in the distance created between surface and iron structure reflecting a visual mechanism not uncommon in virtual sculpture, applied in various ways in the environmental installation art of seventies. Bearing in mind the historical record that the 1976 Venice Biennial International Exhibition of Modern Art revealed to a larger public tackling the theme of art-environment in the 20th century, we can appreciate how successfully Bernardini has taken reference from this area to enhance his own spatial inventions. In fact, since he left the self-enclosed confines of painting and sculpture behind him, his attention has been increasingly focusing on transformation of the given place, and the emanation of light taking on bodily presence in that space. With his keen sense of the design process, Bernardini is now attaining the heights of spatial transfiguration, insistently departing from the physically constructed line by bringing into play a range of elements including white in layers, phosphoric pigments, wall surfaces, optical fibres, real shadows and artificial light effects. The various conjunctions between one point and another in spaces follow the flows produced by vacillating geometrical forces whose mutations seem to depend on the eye of the observer, constantly shifting with the movement of the eye above or below the tension of the lines or following their complex play on the continuity of the broken line.

The angles of intersection vibrate more intensely, assuming the role of optical impulses enhancing the energy of the linear path, leading what is in fact technical conditioning of the optical fibre to open up vistas for the imagination. This type of visual tension is only possible starting from a state of inertia in the given space, which the artist acts upon seeking a sort of regeneration, a charge of energy producing unforeseen situations, and thus a completely new form of spatial articulation. However one may seek to fit it into a scheme, the space remains open to the dialectic of light and shade, the ultimately elusive dialogue between them and the length and scope of the observer's gaze, which will vary as it follows the forms, inevitably entering into play itself. Thus Bernardini works on the capacity to see things within and beyond the rigorous structure containing it, turning geometrical space into a theatre of happenings moving through the entire visual range.

The observers clearly play an important role in this mutation of light effects, their behaviour being directly involved in the paths the optical fibres follow; they can view the image close to or from a distance, or variously as their impulse guides them. Every viewpoint becomes internal to the totality of the work: it may take in the global installation or close in on details of the structure with superimposition and fragmentation, possibly even losing sight of the whole. This means participating in the space-time duration of the image, never leaving the field of action, experiencing the vital movements of the forms through slight details that excite a sense of measureless space. It is as if the observer were involved in a sort of psychological mutation of the vision evoked with lines of light in the dark, and began to perceive a different sense of their relations with void, light and even their own physical and psychological identity. Space in Bernardini's conception is distinctly restless, the lines of light revealing disorientation between the structure designed and the behaviour of the observer. No immutable rules or codes can apply here, and the artist leaves the field wide open

for invention, although this freedom of action can only function in terms of the intentions incorporated in the work. Taking even imponderables into account, we might say that the artist's preoccupation approaching his work is to construct the complexity of space, although he is ultimately prepared to accept its deconstruction; he begins by creating orientations that can subsequently be followed while also prepared to accept the value of disorientation, loss of reference and off-key response to the promptings of the design. Thus organisation in a dark environment must also take account of two-dimensional aspect associated with a certain viewpoint, for example gauged to the eye of the visitor entering the gallery, while bringing the three dimensions into play as the observer moves about the space.

In fact, the artist's intention is to create a space suspended in the instability of its image, controlled but constantly shifting, formal rigour reconciled with the free flow of the observer's senses as the linear structure itself gives way to an enhanced sense of the visual field. Bernardini's strategy therefore develops between constructive and visionary, between the spatial lightness of luminous lines and the density of shade enveloping everything in the darkness necessary to light. The work hangs suspended between presence and absence, light and invisibility, observation of images with artificial light or sunlight and perception in absence of light. The latter case was aptly evoked by Enrica Torelli Landini: "And, as the retina adjusts to the dark the luminous object stands out in ever sharper definition, opening out in space and to interpretation. Thus a visual continuity is achieved beyond the saturation of light, somewhat like a galaxy that is invisible by day but gradually emerges as night falls. "Clearly Bernardini has consistently aimed at using technologically elementary means to achieve a high degree of spatial complexity, but it is equally clear that the methodology has never been applied mechanically; on the contrary, it is a sense of poetry that guides the artist in his exploration of the ultimate in possible spatial structures. Significantly enough, in his manifesto entitled "Division of visual unity" Bernardini considers how we may "sense the presence of what is theoretically invisible", with the idea of creating a "rapport in projection between the visible and invisible, both as a sort of transmigration of sense perception into objects and as a sort of demolition of the concept of the oneness of the work."

Light, shade, appearance, primary sensation, reality and illusion- these are the terms of Bernardini's exploration of the invisible, splitting the image into various units and thus closing in on the virtual, unobservable spaces, places suspended in a condition that opens up to the imagination what lies beyond the customary bounds of awareness; imagining the self-kaleidoscoping" image, as Bernardini grafically defines it. So it is that a doubling rhomboid, sliding triangle or flattening rectangle create the poetic conditions for light to body forth, architecture resolving into resonant space, the "local habitation" of the mystery and immaterial reality that envelop our senses.

May 1999

LIGHT SYSTEM

by Nadja Perilli

Carlo Bernardini is an artists who divides his time between scientific research and creation: his works are fibre-optic organisms, created in material from the world of technology. Exploiting the possibility to appear and disappear. The light systems take on substance in the dark, by means of metaphysical mechanisms – flashes of matter that do not illuminate but determine precise, set paths, leading us to other systems that have their origin in the same organism and are autonomous.

In the dark we have purely evocative matter, luminescent yet futile since it cannot illuminate, experimental in its uselessness, creation in its capacity for risk, in the peculiarity of existing only for a brief period – the duration of darkness.

In the light the organism remains a tangle of transparent threads that cannot be "turned off" but get in one's way, teasing the perceptive system; threads perceived at the tactile level, no longer seen – a net of perception that plays on the observer, occupying space but empty of all elements.

Bernardini's systems go through the spell of metamorphosis as in the myth of Apollo and Daphne: a woman turns into a tree at the touch of the god, limbs sprouting leaves at the extremities. The striking ribwork of light comes on, with coherent geometrical forms enwrapping mystery, luminosity serving only to identify them as physical reality.

The system of Daphne touched by Apollo/light takes on it features, such that can be perceived with the entire sensorial system, exposing it to analysis of the tangible through sight, and of sight through the corporeal. The organisms open up

to perceptive interpretation, with constant modification in the use of the senses: their peculiarity is to be sculptural and pictorial at the same time, dimension denied or at any rate exposed to the visual-tactile play of negation. The lines identified by the fibres both in the installations and in the sculpto-picto-installations are sharp and two-dimensional – paths of pictorial light that ramify creating multi-dimensional pods that can be penetrated and entered as solved mazes: you know the way because the artist's creative force is revealed in the ambiguous mode of scientific perception of a work that at the same time can never be seen.

In the installations we become aware of instability seeking stability: we lose our way but find ourselves only by looking with the whole set of senses.

The need for multi-sensoriality is also felt with the sculpto-picto-installations built with optical fibres and steel, or with optical fibres and Plexiglas.

These works convey cold sensations, frozen images – a snapshot of the installations, a different viewpoint, an autonomous organism generated by the installation organism.

The use of solid material like steel with the optical fibres takes us to the moment when Daphne has already become a tree: the work has taken on a new physiognomy; self-generated, it has become new creative potential. Here the fibres are also functional, making support gentle, light and filamentous, steel losing its principal characteristic to dissolve, interacting with the fibres which in turn work their way into the steel and stiffen, no longer appearing as threads of light but beams of strength, bearing elements, as one material enters the other.

The perceptive system can capture these impulses of change and find itself within the work while at the same time remaining without.

When the fibres are inserted into the Plexiglas Daphne becomes woman again, naked and defenceless. The transparent pod contains the fibres and leaves them free to the inner gaze: the perceptive system is entirely taken up in a spiral of sensorial possibilities, while the whole body is drawn into the sculpto-installation, homing in on the artist's creative force.

The play is no longer ambiguous but made clear: instability no longer emerges from the seeing-non seeing variable but from the energy unleashed in perception of excess.

February 2003

LIGHT WORKS / LIGHT SCULPTURES

by Rachele Ferrario

Carlo Bernardini began his artistic career as a painter. His early works, over ten years ago, are abstract surfaces traversed by sfumato shadow lines dissolving with a slight distortion of visual perception. The cement-grey backgrounds leave room for luminous cones of white and – after a brief parenthesis that saw steel tubes emerging from the canvas to create real shadows – the particular luminescence of phosphorous. In his works the confine between two-dimensional and three-dimensional surface, between painting and sculpture, has ever wavered about a dividing line consisting, in fact, of a dark projection of lines. With a solid background represented by the abstract work of Malevič (whose *Black square* goes back to the scenery designed in 1913 for the futurist work entitled *Victory over the sun*), Mondrian and Albers, but above all the use of neon made by Lucio Fontana, the Argentinean artist Gyula Kosice, Dan Flavin and Bruce Naumann, Bernardini also took an interest in the laser works of Maurizio Mochetti and the phosphorous tubes of Gianni Colombo (observing the suspended dimension of space resulting from a fine balance between geometrical forms, mechanical-technological application and transformation of the environment occupied by the installation).

Today Carlo Bernardini is one of the few artists of the generation now in their thirties to pursue research and experimentation on light with an innovative, technologically advanced approach, using optical fibres and electro-luminescent surfaces. He is aware of the importance of past experience and supports his work with theoretical texts that take on the force of mathematical proofs: if practice matches theory, then the works will be the result of modular sub-division or multiplication of a form in reality – symmetry finding total synthesis in geometry and space.

For Bernardini it is the triangle that represents perfect form. The triangle splits into a rhomboid, which in turn splits into four triangles according to interchangeable models ad infinitum. Free forms emerge in space, suspended in time: sculptures in light, where darkness acquires depth with the varying dimensions of the optical fibres. The other materials used can only converge on the objective of a oneness of vision.

Positive/negative, light/shade are the poles between which the technological experimentation is carried out. The larger the luminous installation is, or the higher it rises, the more energetic will be the force of reflection as light works and spreads on the dark surface. Here Bernardini's latest works mark a breakthrough. Apart from steel, which contained the light works within well-defined structures, the artist has chosen the transparency of Plexiglas to enclose and, at the same time, liberate the light works from their metal skeleton. Moreover, Plexiglas also happens to afford soft, subtle reflection, implicit in its synthetic nature but allowing for intervention in terms both of transparency of space and at the level of vision, enhancing the effect of suspension and lightness.

It is a surer overall vision, with a fine sense of choice of materials and application of technology. This certainly has something to do with the artist's visits to New York, and the fascination of the rational verticality and luminosity of architecture reflecting on the city skyline, the new works showing linearity accentuating movement and upward thrust, creating gleaming patterns in empty air.

In Bernardini's recent installation at the Triennial, for the exhibition on Italo Calvino's *Città invisibili*, the optical-perceptive dynamics were already showing an upward evolution, leaving negative space and shade free. Thanks, however, to the reversal of the image and diffusion of light with electro-luminescent surfaces and optical fibres of greater dimensions, Bernardini has endowed the luminous effect with enhanced physical substance.

Unlike the other open-air installations where the architecture of the place interacted with the work excessively, on this occasion he uses three autonomous geometrical modules associated through the perception of a single luminous environment. Thus he goes on from the "virtual" volumes – ethereal entities of light and shade – to concentrate on the sense of space. "They can be viewed in the light," says the artist, "but perception of the surface around them remains unchanged. Darkness was suited to the sculptures with smaller optical fibres". The millimetric difference of the larger optical fibre affects the projection of light and thus the impression on the eye, which no longer needs the dark to receive stimuli, penumbra sufficing.

"Incorporeal as they are, light and shade are visible," Bernardini writes in his theoretical text entitled *Ipotesi per la Divisione dell'Unità visiva*. "Shade is dark projection of things, occupying the other side of the body. It enhances perception of existence while remaining elusive, impossible to grasp. The other side is situated beyond the limits of appearances – a further aspect or dimension, as it were: it is the second visual condition implicit in what we are observing".

Bernardini knows that in the history of western art painting emerged "in negative", when man succeeded in enclosing with a line the shadow of a human being cast on the ground. The shadow, reduced to two-dimensionality, elongated and unreal, depends on the source of light; deceptive, it can change or disappear at any moment. In penumbra, however, light is diffused, attenuating visual impact to create a sense of suspension in time and space. Thus, following the rate of technological innovation as it advances rapidly yet with tiny steps, between experimentation and technical/technological know-how Bernardini invents a space, a place and works of light as "embryos of the infinite possibilities" of abstraction and modern-day metaphysics.

February 2003

LIGHT LINE

by Vittoria Biasi

A vast amount of documentation attests to the esoteric value of light - religious and artistic - celebrative. Solemnization of the Eleusinian mysteries has light as a basic element from the preliminary phases, transition from dark to light marking the moment of change brought about with illumination. In noble Roman households braziers for illumination were placed as close as possible to the wall, thus transformed into a zone of refraction and release.

The Olympic Games open with the traditional light of flames, which becomes memory and communion.

In all symbologies, historical, religious or artistic, light eludes any ultimate definition. It is the subtle thread, the primary emotion bringing together and uniting people and times. In the alternation between significance and signifier, motion and emotion, light has its 'draft' in the *arché* of the spirit, an invisible, capturing force in its white universality –

the sense of origin common to all.

Since its very first appearance in the world, artificial light has emulated its natural counterpart. Thus the inauguration of the semester of Italian Presidency in the European Parliament opens in the light of art.

In an evocative scenario, from Michelangelo's spatial conception manifested in Rome's Campidoglio to the contemporary architectural sensibility revealed in the Parliament Squares of Brussels and Strasbourg, Carlo Bernardini's "*Light-line*" sculptures find ideal collocation: from July 1st they will be shining out, creating poetic links between geographically distant places, just as the white line on astronomic charts links distant stars to endow constellations with identity.

The artist's sense of light derives from research on linguistic essentials brought into interaction with limitless time, beyond spatial identity. To the echo of the monochromatic poetics of perception developed in the '50s and '60s, the illumining language of Bernardini emerges as reflection within the space-movement of particular places. The sculptures represent a challenge between perception and verticality, linguistic extension between the depths and the sublime, between earth and that sky which the works reach up to. For Rome the dimensions of the sculptures come to about four metres, for Brussels and Strasbourg about three and a half.

The virtual space of the sculptures is braced with sharp points of brilliance, stations of rest, as it were, on the route followed by the light, or the emotional concentration of traversing darkness. The experience of luminous vibration as transition from dark light is translated in titles for the works such as "*Permeable space*" and "*Division of visual unity*". The sculptures can be grouped according to denomination as in grades of perception of the illumining experience.

Since 1996 Bernardini has been drawing light into perfect geometrical figures deriving from his previous work in monochromatic painting and the linguistic procedures of veiling, white diaphanously drawn over white, at the very limits of the visible. To read the invisible writing present on the white surface light needs refining from within, and the capacity to follow free circulation over a plane. From the very outset the artist has transcribed the luminous movement of surfaces in lines attributed with the function of circumscribing and gathering in the sense of unity, while achieving autonomy to become a work of sculpture. The transition from two-dimensional work, drawing light from white, to the exploration of virtual planes and the sculptural dimensions of light itself has for Carlo Bernardini been of central importance in his reflections on the light-dark borderline.

The slender line of optic fibre is the body and minimum theatre of the infinite. It traverses space, revealing the plasticity of shade on darkness, the malleability of the void traversed by the frisson of light.

The optic fibre appears as a horizon line along which perennial operations are performed, including a synthetic, luminous 'scansion'. Small reflecting surfaces transport light from the fibre source to the ultimate visual possibilities: a succession of cross-references, tales told by progenitors and repeated to offspring in sequence, a tradition making the past ever present.

We can distinguish two levels of research in the sculptural work with different light and visibility relations: support (or steel structure) and optic fibre.

The former has dimensions and proportions deriving from the relationship with the spatial situation it becomes involved in and the extension and thickness of the fibres. The design structure recalls at a stylized level the representation of the biblical cosmos supported by columns.

The world conceived in the biblical accounts is governed by greater or lesser light, by shade and by darkness.

In the dark, the optic fibre support structures recede, overwhelmed by the fascination of lines of light. These lines meet at the summit, in general three for each image, creating virtual volumes, bringing energy exchanges into play, triggering electromagnetic interaction.

The linear, geometric light work of Carlo Bernardini delimits self-referential space, towards which converge quantum relations made poems of light. The technological aspect of the work is simple and marginal: technology is the tool to trace lines linking distant points and thus see "frissons de lumière" traverse them.

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