IN LIGHT. Sally Weber's light sculpture "Alignment"

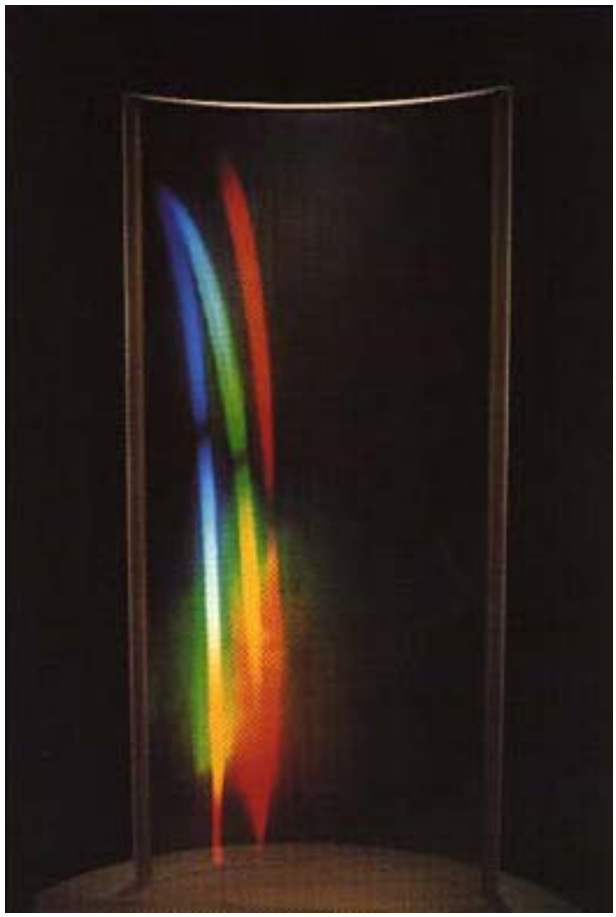
"If the eye were not sun-like,
How could we see the light?"
J.W. Goethe

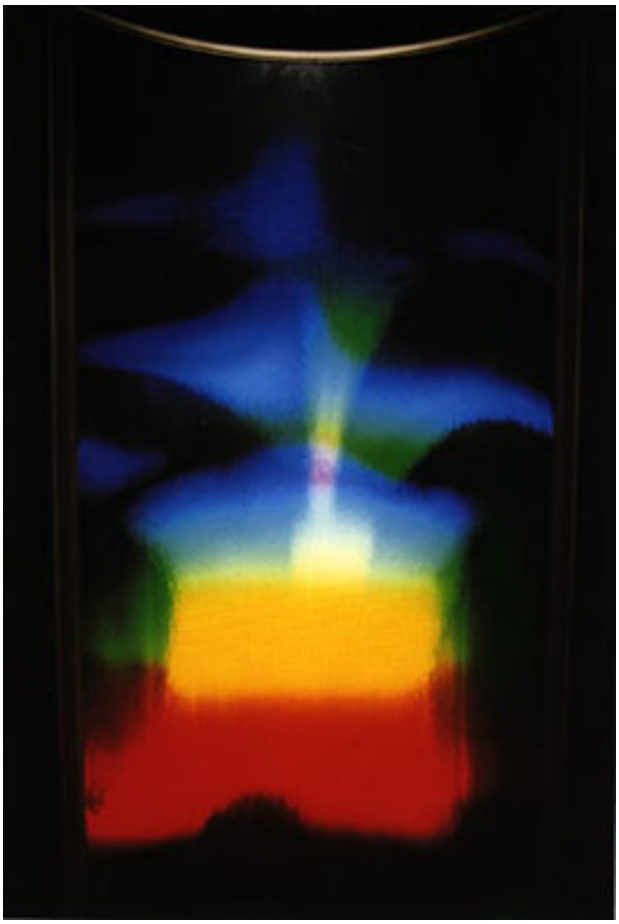
I.
Sally Weber's "Alignment" is not an invention which appears in place of Nature or as a nature in its own right, but a sculpture in which the artistic concept places itself at the service of an elementary natural phenomenon, at the service of light. "Alignment" is not a formal construction which uses physical conditions merely to produce an effect, but a design in which the relationship between a shape and the natural conditions which give form to this shape is revealed in the design itself. "Alignment" represents what it is and yet it is as concrete and as immaterial as a rainbow.

"Alignment" is a curved holographic surface in the form of a monumental stele which can diffract and focus light in such a way that a complex, seemingly dynamic pattern of colour and light is created which appears as a mass of coloured light in front of the stele, but which only exists in the perception of the observer. This is precisely where "Alignment" differs fundamentally from conventional sculptures. Its haptic material form - a structure made of acrylic glass to which a holographic film has been applied - has no sculptural value in itself but functions exclusively as an instrument with which the light sculpture is produced. "Alignment" is thus an immaterial sculpture, a spatial phenomenon which, although it occupies space and is present like a tangible object, eludes definition in terms of space and mass and exists only in our visual perception.

Viewed from relatively far away, "Alignment" first appears as three slightly curved, coloured strips of light - green, red and blue - which appear in space about two metres in front of the stele. As one approaches "Alignment", these coloured strips increasingly merge in the viewer's eyes and, like in the Rorschach Test, form symmetrical areas of colour in which the entire chromatic spectrum, from red to yellow and green to blue and violet, can be seen layered on top of one another. Depending on the position of the observer, these areas change colour and form. Viewed from relatively close, the 'grow' into a colour-light continuum which almost totally surrounds the observer, so that one has the impression of standing in a space of light and colour. However, if one approaches even nearer, the space of light and colour is reduced to a single strip of light and eventually one perceives just a virtually pure white line of light with only touches of colour on the edges.

In fact, it is impossible to give a precise description of the sensation of light and colour which one experiences when viewing this sculpture, although one experiences it as something with an objective existence through one's own spatial movements. For "Alignment" has no standardised view but rather develops its aspects solely to the extent that the observer becomes involved with it, i.e. looks at it while passing in front of it. But however individual one's experience of "Alignment" may be, one common feature is that viewers do not experience something placed at random but an objective natural phenomenon, the laws of light.





II.

"So what is reality: the perceived appearance or the physical structure we know gives rise to this appearance?" 1 This question raised by Karl H. Pribram in the context of a discussion on the holographic paradigm, touches on a fundamental problem of artistic creation and is thus not new.

There is a dialectic between image and content in every hand-crafted picture. I can describe a material level on which I see colours, a canvas and certain techniques but no picture; however, it is always essentially impossible to describe why and how I can nevertheless also perceive this material state as a picture. The perception of pictures is indeed a productive process, a reproduction in the literal sense of the word, the reciprocal activity in relation to the act of painting where a real or imaginery scene is translated into a picture using certain techniques and material. Since the dialectic between content and image in a hand-crafted picture attains an individual synthesis, such pictures require an appropriate form of viewing: just as the creation of such pictures presupposes certain skills, their appropriate reproduction also requires certain skills - skills which one does not always possess - and consequently not everyone can adequately perceive every picture.

This "dilemma" of individual picture production was solved by photography in the nineteenth century. Photography abolishes the autonomy of the individual, which is the crucial factor for hand-crafted pictures, and relpaces it with the autonomy of the picture production system. It combines the individual artistic techniques in one single technical process whose essential workings cannot be influenced by people, merely individually applied. Photography has effected a corresponding change in the perception of pictures. Reproduction has been replaced by reception, the mere receiving of images and a "normalisation of experience" (Carl Einstein) has become established.

ertain techniques for producing pictures always correspond to certain aspects of perceptivity. The parameters of techniques for producing hand-crafted pictures are feats of memory: abilities stored in tools, skills and knowledge, the use of which has to be individually learned. By contrast, picture production processes are models of organic functions and are essentially just as difficult to control once they exist. The parameters for picture production processes are the laws of Nature; in principle, their application is only technically limited. The best example for a complex picture production process is once again photography which can imitate the image reproduction process in the human eye. By comparison, holography is a picture production process which seems technically able to reproduce the mental process of perceiving images, the human brain's faculty of perception.

In my opinion, the most significant aspect of the holographic paradigm is David Bohm's idea of the "folded order". According to this theory, all things which have virtually the same degree of folding are connected, however distant they may be from one another in terms of space and time. Bohm explains this concept by citing an experiment: One puts a drop of ink into a double glass cylinder which is full of a viscous liquid. If the inner cylinder is slowly turned, the drop is drawn out into a long thread which spreads throughout the whole system and is finally no longer visible. If one turns the cylinder back again, the drop previously mixed in the liquid suddenly reappears. Bohm describes the drop drawn out into a thread as "folded in the liquid" and this drop is different from a second drop which one has put into the liquid whilst turning the cylinder, above all through the degree of folding. For while the one drop has been drawn out into an invisible thread, the other may still be visible, whereas - when the cylinder is turned back - the one may become visible to the extent that the other is drawn out to a thread. If one now folds a lot of drops into the liquid, these drops will appear one after the other when the cylinder is turned back and, if the turning movement is fast enough, it will look as if one single drop is moving through the liquid. "But this particle moving before our eyes is merely an abstraction which manifests itself in our sight whilst the reality is the

folded order which is constantly a whole and essentially independent of time. (...) We can thus say that what is visible is only a small part of the folded order. We therefore introduce the distinction between what is manifest and what is non-manifest. It can fold itself and become non-manifest or unfold itself into a manifest order and subsequently fold itself again. We claim that fundamental movement consists in folding and unfolding. By contrast, Descartes' view of fundamental movement is the traversing of space in time, a localised object which moves from one place to another." 2 As Pribram writes, the only thing which therefore counts in holography is "the density of events. Time and space have collapsed in their respective frequency ranges. The normal boundaries of space and time, locations in space and time, (are) therefore suspended and have to be "deduced" (...). In the absence of space/time coordinates, the usual causality on which most scientific explanations depend must also be suspended. Categories such as complementarity, synchronicity, symmetries and bilaterality have to be employed here as explanatory principles."3

As a concrete light sculpture, as a colour/light composition, Sally Weber's "Alignment" is not merely a paradigmatic example of Bohm's and Pribram's theory of "folded order" but, as its "depiction", also graphic evidence for this theory - quite in the sense of a scientific experiment. For the sculpture makes the process of folding and unfolding immediately evident and, to the extent that the sculpture only exists in the view of the observer and only manifests itself through the observer's own perceptive spatial movement, anchors it in the observer's psycho-physical experience.

III.

"Alignment is one of the artists's principal works. It was created in 1987 as the result of intensive theoretical studies of historical light architecture and extensive research into holographic techniques. The production of the hologram, which measures approx. one metre by two metres and is mounted on a stele, took about two years of experimental work and was finally undertaken in a factory in California which specialises in holographic techniques. Quite apart from its artistic significance, "Alignment" is a pioneering work of holography in technical terms alone and represents not only the latest "state of the art" with regard to this medium, but also a claim of traditional artistic work - now virtually lost today - which always linked artistic perfection with technical mastery and innovation. "Alignment" arose out of experience which the artist had gained with earlier place-related light sculpture, primarily "SunCycle" (1981), "Lightscape" (1982) and "Focalpoint" (1982). These works dealt with various aspects of sunlight, by receiving and diffracting it in specific ways. "SunCycle" focussed sunlight in a circular area consisting of three thousand small parabolic reflectors. The effect was that the cyclical path of the sun was coordinated with the movements of the observers who walked around the work, thus making it appear alienated. Contrary to all expectations, "SunCycle" did not reflect sunlight equally; the reflectors darkened to an increasing extent as the observer walked around and the mirror effect virtually disappeared at a certain position.

Whilst "SunCycle was primarily about the elementary experience of sunshine, sunlight as a generator of colours was the main subject of "LightScape", the sculpture in which Sally Weber used holograms for the first time. Regardless of the position of the sun and the observer's viewpoint, the four bow-shaped elements appeared in changing colours, unfolded the white sunlight into a sensation of colours which the sculpture "Focalpoint" also produces but applies in quite a different way. "Focalpoint" , a permanently installed sculpture, is Sally Weber's first attempt to give a specific direction to a spatial situation via sunlight, to define and individualise it through sunlight.

If one can consider the three above-mentioned sculptures as instruments for portraying the various aspects of sunlight - its cyclical appearance, its quality as a generator of colours and its direction - "Alignment" not only assumes these aspects, it also combines them into an independent "picture" of light. The artist quite consciously refers to the mythological roots of cultural tradition in dealings with light. She writes: "Alignment, the sculpture, is conceived of as an axis mundi. The symbol of the center can be solid - as in the case of the tree of life, or void - as a whirlpool. The sculpture, like a person reaches

outward. The focal lines suggest the spinal column, our own central axis which holds us erect. Standing in the focus, we see light pattern as if looking outwards from the center. The axis mundi recurs throughout organic life. Alignment is an experimental recreation of this primary organic symmetry."

"Alignment" does not have the character of an objective picture like a photograph, for example. It is an artistic, subjective composition. But as this subjective composition, "Alignment" is the 'picture' of an objective phenomenon, a sculpture in which Nature is no longer instrumentalised but becomes reflective and can compose itself - as we can with it.

With "Alignment", Sally Weber seems to have achieved what was for a long time the goal of Piet Mondrian's theoretical and practical endeavours: to develop a picture of pictures, an ideal picture, something out of which the entire cosmos of colours and forms can be developed. Admittedly, it is not achieved as in Mondrian's work, as an abstraction of colours and forms through the means of a painter, but as a concrete and natural phenomenon, as an emanation of light itself.

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1 Some passages in the following section contain formulations which were originally published in an essay on: Dieter Jung, Bilder Zeichnungen, Hologramme (Pictures, Drawings, Holograms), Cologne 1990. 2 Marily Ferguson, Wirklichkeit und Wandel (Reality and Change), in 3 Karl Pribram, Worum geht es beim holographischen Paradigma? (What is the holographic paradigm all about?) in: Ken Wilber (Ed.), Das holographische Weltbild (The holographic world view), Berne, Munich, Vienna 1988, p. 35 f.