

CONTEMPLATING PARALLAX

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There has been a good deal of talk recently about the changing role of the observer in relation to the work of art. Art, as McLuhan would have it, is becoming "cool", requiring more direct participation and involvement on the part of the observer, demanding from him a greater degree of "closure", or completion, before the work can be understood as a totality. With the return of the Baroque principle of envelopment, in environmental art and walk-through sculpture, the observer is now often literally included within the work of art itself. He is encouraged by the Groupe de Recherche d'Art Visuel to engage in physical assaults on distorted stairways or wobbly blocks. Or, he is invited to share in the creative process by manipulating such "movables" as Talman's black and white balls, adjusting Picel's swiveling and telescoping antennae, or flipping the hinged planes of Lygia Clark's "grubs" and "animals". Writing about kinetic light art, Frank Popper says that "the implications of the use of real light (and real movement) definitely point towards action rather than contemplation"²—a state of affairs which Harold Rosenberg laments as a loss of individuality. Immersion of the audience and the art work in "a sea of occurrences", Rosenberg says, "marks the end of contemplation, which had survived chiefly in our attitudes toward the spatial and 'static' arts of painting and sculpture. In compelling the participation of the spectator, the new art asserts that no still spot exists from which one can merely look".³

The identification of a fixed station point (and single vanishing point) with detachment, contemplation, and individualism is a familiar part of the "McLuhan Galaxy", "Cooling" of this "hot" situation, however, does not necessarily mean the loss of disinterested contemplation. Within the past few years, there has been a revival of a type of art and a mode of perception which permits a mix of motion and involvement together with a very high degree of creative, critical apperception. Movement is of primary concern, but there are no motors, no magnets, no currents of air or water, to set the work in motion; the work of art, in fact, stays stock still. It is the perceiver who moves and by his movement sets the object or the environment into apparent counter-movement. In this kind of art, the degree and direction of movement are completely dependent upon the will of the perceiver. Any kinetic sequence is completely reversible and can be minutely analyzed. The situation, then, is highly conducive to contemplation. It can be completely absorbing, but this kind of contemplation consists of highly conscious acts of comparison and analysis as one views individual objects, or the whole environment, from different points, separate and static, or continuously changing, gliding and shifting.

I.

The transformation of the visual field resulting from a change in viewpoint is called "parallax". The difference in the views of an object, which we receive through each of our two eyes, is an important depth cue, known as "binocular parallax". This small disparity in viewpoint between the eyes is enough to set nearby objects into apparent motion, if we do no more than close one eye, then close the open eye, and open the closed one. This will set up what psychologists call the "phi phenomenon", as the object appears to shift from one point to another. This alternate closing and opening of the separate eyes is often enough to activate the simpler forms of "parallactic art" (i.e., works which encourage observation from more than one point of view). The smaller "polyphonic tableaux" of Agam or Soto's striped boxes will begin to work this way, but more movement will be induced by tilting the head from side to side, or by walking past the work, the tempo and sequence of the transformations being directly dependent upon the movement of the perceiver.

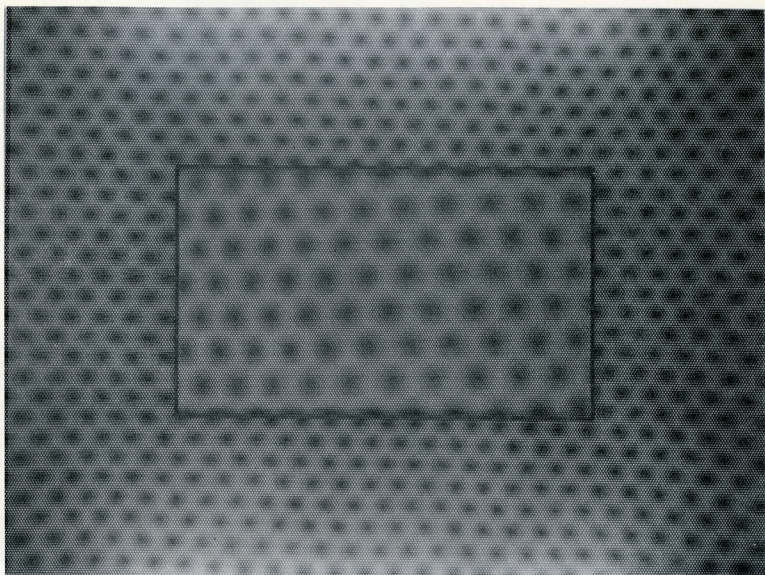
Movement forward and back, as well as movement from left to right, contributes to the sumptuous parallactic effects achieved by Josef Levi in his *moiré* boxes by the simple superposition of perforated sheets of steel. With Levi, the sequence of effects is not so rigidly prescribed as it is in Agam and Soto's much "hotter" works. In their work, one must move back and forth within a certain range to achieve the peak effect, but in

front of one of Levi's boxes, the viewer has much greater freedom; he is more kinesthetically involved. Since very little is offered in a material way, the viewer is free to create his own work of art from an unlimited number of possible kinetic sequences. With Levi, less is definitely more. The longer the viewer contemplates one of Levi's boxes, the less inhibited he becomes and the more his movements take on the appearance of a waltz as he bends, swoops, sways, shifts and glides about the gallery, oblivious to those around him, until his particular dance collides with theirs. Looking into one of Levi's lighted boxes is in all respects a "depth experience" which is extraordinarily similar to the "cool" TV medium, right down to the dots and the tactile effect of light through rather than light on! There is absolutely no question of any content; the medium is decidedly the message. Each viewer is his own cameraman; he transmits and receives his own message.

Although the perceiver must move to appreciate the transformations of an Agam, Cruz-Diez, Soto, or Levi, the works themselves are static. They are clearly related to a wall plane and are, therefore, basically pictorial. In this, they reveal their descent from those earlier attempts to suggest parallax effects on a flat surface which can be traced all the way back to Wheatstone's invention of the stereoscope in the mid-nineteenth century. Stereoscopes, however, did not prove to be an important artistic stimulus *per se*. Only recently have artists such as Francis Hewitt of the Anonima Group turned seriously to making drawings for stereoscopic viewing. It is Cézanne who is generally considered to be the first modern artist to consciously and systematically introduce multiple viewpoints into painting. Just bending the head, one way or the other, was sufficient for Cézanne. On the edge of the river at Aix, he found that "the same subject seen from a different angle gives a subject for study of the highest interest and so varied that I think I could be occupied for months without changing my place, simply bending a little more to the right or left."⁴ Such slight shifts in viewpoint are increasingly evident in his later landscapes and still lifes.

The simultaneous presentation of multiple viewpoints might even be said to be the chief generative principle of the analytical cubists who followed Cézanne. The cubists achieved an important break-through in painting by integrating the many possible views of an object upon a single two-dimensional surface, but this kind of self-conscious kinetic vision was not new to the three-dimensional arts. The genius of the cubists consisted in the transfer of the underlying principle of what Panofsky called "revolving-view" sculpture to the tradition of painting. Through the use of the spiralling *figura serpentinata*, extreme foreshortening, and the partial concealment, from any given point, of some significant member, Mannerist sculptors had managed to tease the spectator around their figures so that the statue itself, as Cellini said, "seems gradually to turn round so as to display, not one view but a hundred or more".⁵

Cellini was convinced that this multiplicity of views proved the superiority of sculpture over painting, which, he thought, could represent objects from only one point of view. In the Renaissance debate between sculptors and painters known as the *Paragone*, or "comparison of the arts", Leonardo admitted that the "sculptor in completing his work has to draw many outlines for each figure in the round so that the figure should look well from every aspect", but he concluded that, in this respect, the painter's job was no less difficult than the sculptor's since he too must have "an accurate knowledge of all the outlines of objects from every aspect".⁶ Vasari relates how Giorgione entered the debate and, like some proto-cubist, argued that painting was superior because "the painter could display various aspects without the necessity of walking round his work, and could even display, at one glance, all the different aspects that could be presented by the figure of a man, even though the latter should assume several attitudes, a thing which could not be accomplished by sculpture without compelling the observer to change his place, so that the work is not presented at one view, but at different views".⁷ To prove his point, Giorgione painted a figure, seen from behind, but revealed in its other aspects through reflections in a limpid stream, a mirror, and a piece of polished armor. The paintings by Titian and Velazquez showing Venus before a mirror are probably further reflections of Giorgione's trick, which has now been topped by the introduction of mirrors into sculpture. McLuhan would undoubtedly pronounce Giorgione's lost painting a "hot" attempt to force as much information as possible into a fixed and static view of a world of uniform and continuous space. The perceiver's experience of revolving-view sculpture is certainly "cooler" and more dynamic. It is his own move-



Josef Levi. *Simurgh*, 1965. Lixitex, perforated metal, fluorescent light; $45 \times 57 \times 6\frac{1}{2}$ ". Collection: Albright-Knox Art Gallery, Buffalo; gift of Seymour Knox

ment which creates that gradual unfolding of form which Gombrich has poetically termed a "melody of transformation".⁸

II.

The "melody", resulting from kinetic parallax, is called "deformation" or "serial transformation" by psychologists of perception and is one of the effects which would probably be subsumed under the incantatory term "space-time", popularized by Siegfried Giedion and Moholy-Nagy.⁹ The effect, of course, is most pronounced in fully three-dimensional works of architecture or free-standing sculpture which can be completely circumambulated. The parallax reliefs of Agam, Soto, and Levi usually encourage movement only in the relatively shallow space directly in front of them. There is a definite front and a back to the works and the back is usually set against a wall. It is in free-standing sculpture that one finds the fullest exploitation of parallax effects nowadays. The melody of transformation has been played more vigorously in our own century than at any time since the days of Cellini, Ammannati, Tribolo, and Giambologna, after which the revolving-view principle was supplanted by the single dramatic view favored by Baroque sculptors and then succeeded by the principle of composition in parallel planes which was revived by Neo-classical sculptors. A few years ago, Henry Moore even revived the old problem of the *Paragone*. "Sculpture", he said, "has some disadvantages compared with painting, but it can have one great advantage over painting—that it can be looked at from all round; and if this attitude is used and fully exploited then it can give to sculpture a continual, changing, never-ending surprise interest." As an example, he cited the serial transformations of his *Standing Figure: Knife Edge* of 1961: "In walking round this sculpture the width and flatness from the front gradually change through the three-quarter views into the thin sharp edges of the side views, and then back again to the width seen from the back."¹⁰

To the Mannerist tradition of the revolving view, Gabo, Moore, and others have added holes. The hollow volumes of their works are often more significant than the masses. Thus

the changing contours of the negative shapes may be more interesting to the circling observer than the deformation of the solids. The thinness of the solids and the distinct spatial separation of edges may set up, within relatively narrow limits, noticeable changes in the rate of apparent movement between those parts which happen to be close to the observer and those which are further back in space. The closer parts will appear to pass more rapidly than the more distant parts, which may seem to remain still until parts are spied still further back, whereupon those parts, which appeared at first to be most distant, will now also begin to move, but at a slower rate than those in the foreground. The direction of apparent movement will be contrary to the actual movement of the observer, except when an object is so distant that it appears to move continually along with him, as the moon does when we ride or walk at night.

Although psychologists credit Helmholtz as the first to describe the effects of kinetic parallax (*Handbuch der Physiologischen Optik*, 1866), extensive descriptions of parallax effects abound in eighteenth-century criticism, especially that dealing with architecture, garden design, and Picturesque theory. This is particularly significant in light of recent developments in sculpture. The tremendous increase in scale, the introduction of complicated parallax effects, and the concomitantly greater involvement of the spectator within the ambience of the work has resulted in a striking coincidence between this body of eighteenth-century Picturesque criticism and the remarks of those concerned with sculpture today. Close examination of these correspondences may, in some measure, indicate the direction of artistic development in the near future.

III.

While discussing the principles of proper garden design, Lord Kames (*Elements of Criticism*, 1762) cites serial transformation and the moon effect as phenomena contributing to the greater variety of an oblique approach to a country house as opposed to a direct approach:

In an oblique approach, the interposed objects put the house seemingly in motion: it moves with the passenger, and appears to direct its



Henry Moore. *Reclining Figure No. 1* (two pieces), 1959. Bronze, length 76", height 51". By courtesy of Marlborough Fine Art, London

of England (1771). Young felt that ruins would lose their hold on the imagination if they were explored too extensively. For Young, as for Moore, "partial concealment" was one of the most important principles of a Picturesque aesthetic. Young thought that ruins

generally appear best at a distance; if you approach them the effect is weakened unless the access is somewhat difficult. . . . Looking as it were stealthily through passages that cannot be passed, heaps of rubbish stopping you in one place, broken steps preventing both ascent and descent in another; in a word, some parts that cannot be seen at all, others that are half seen, and those fully viewed broken, rugged, terrible. In such the imagination has a free space to range in, and sketches ruins in idea far beyond the boldest strokes of reality.

To Young, as Christopher Hussey says, "a ruin was a mighty picture in three dimensions".¹⁴ The same might very well be said of Moore's landscape figures. He himself has said that, while he was working on one of them, he was constantly reminded of a bold rock in a Seurat landscape (*Le Bac du Hoc Grandcamp*)—not a real rock, but a painted rock, one that had already been transformed through a Picturesque sensibility.

IV.

course so as hospitably to intercept him. ("Vision in Motion!") An oblique approach contributes also to variety: the house, being seen successively in different directions, takes on at each step a new figure.

In sculpture, as in landscape design, the interposition of objects will add variety and enhance the effects of kinetic parallax. I think this helps to explain the increasing popularity of sculpture composed of totally discrete units. Speaking of one of his two-piece landscape figures, Henry Moore recently said that "one form gets in front of the other in ways that you can't guess; and so it has more variety than probably any other piece of sculpture that I've done up to this date".¹¹ Using the very language of the Picturesque tradition in which he, as an Englishman, is so firmly rooted, Moore speaks of "variety" and "surprise" as one "tours" his landscape figures:

If it is in two pieces, there's a bigger surprise. You have more unexpected views; therefore the special advantage over painting—of having the possibility of many different views—is more fully exploited. The front view doesn't enable one to foresee the back view. As you move round it, the two parts overlap or they open up and there's space between. Sculpture is like a journey. You have a different view as you return. The three-dimensional world is full of surprises in a way that a two-dimensional world could never be. . . .¹²

Asked whether he would rather have the spectator move around his landscape figures or have the sculpture itself turn, Moore says that it is better if the person walks around it, so that he can experience it somewhat as he would a real landscape since the sculpture is a "metaphor of the human relationship with the earth, with mountains, and landscapes".¹³ In his physical relationship with the work, however, the viewer remains quite separate. He does not actually move through Moore's "landscape" or walk over it; he only walks around it. Thus, the experience is quite literally Picturesque; Moore's landscape, high on its base, is no more intended to be physically entered than one by Claude or Ruissald. One explores with the eyes, but the body remains behind.

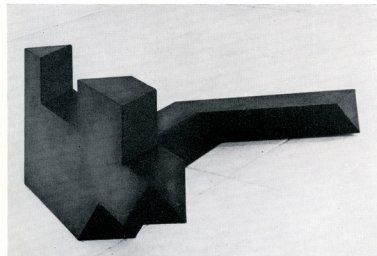
The effect is very much like visiting a ruin with the Picturesque traveller, Arthur Young, on his *Tour through the North*

Much large-scale sculpture today has taken on the aesthetic function of the ruin, real or sham, during the eighteenth century. Many present a pleasing variety of view which eminently suits them as Picturesque objects for a landscape garden. A single piece of contemporary parallax sculpture can make a splendid "eye-catcher" for several prospects in a Picturesque park. This was made abundantly clear this year in Buffalo when, for the "Plus by Minus" show, huge works by Tony Smith, Kenneth Snelson, Mark di Suvero, Donald Judd, Robert Morris, and others were erected around the Albright-Knox Gallery in a park, which was inspired ultimately by Claude, by way of Capability Brown, Humphry Repton, and Frederick Law Olmsted. In the park, even the Judd and the Morris offered an intriguing variety of parallax effects. The I-beams of the zig-zagging Morris shifted into intricate sets of triangles and the spaces in Judd's row of stainless steel cubes appeared, disappeared, and reappeared. Kinetic parallax caused the tubes of Snelson's *Key City* to drift into such varied alignments that it took considerable force of mind, at times, to grasp its underlying symmetry. Smith's *Cigarette* and Suvero's colossal $40 \times 40 \times 30'$ *Are Years What?* (*To Marianne Moore*) were, of course, stunningly Picturesque. The dangling I-beams of *Are Years What?* even bordered on the sublime, striking a note of delicious danger. In fact, the Smith and the Suvero looked like modern ruins. They demanded to be photographed—and from many points of view. This is one of the surest tests of the Picturesque. In regard to parallax, objects are Picturesque in proportion to the number of different pictures they present. This is also a measure of the degree of involvement required of the spectator, because the greater the number of pictures, the greater the activity required of the spectator who selects them. One of the surest ways to become contemplatively and kinesthetically involved with a parallax work is to circle it, approach it, and, if possible, enter it, with camera to eye.

Smith's latest works and most of Suvero's not only look something like ruins, but you can walk *through* them as well as around them. Just as the more convincing artificial ruins of the eighteenth century, they can be explored from within as well as viewed from without. The new walk-through sculptures, stemming from Calder's first large-scale stabiles, stand on the ground. They are without bases and can be entered. Free-standing works, composed of separate pieces but mounted on a base, such as Moore's landscape figures or Giacometti's pedestrians—all those, in fact, which descend from Rodin's *Burgbers of Calais*—present a succession of varied images and encourage movement around the piece, but prevent movement directly into the work. The sense of involvement derived from the exploration of walk-through sculpture is more totally environmental; it is rapidly approaching the condition of architecture and may soon attain that of landscape architecture.

There is a striking congruence between eighteenth-century descriptions of parallax effects in architecture and recent descriptions of similar effects in contemporary walk-through sculpture, especially works composed of separate columnar parts. Compare, for example, the appreciations of Gothic cathedrals by Soufflot, architect of the Panthéon, and his partisan, Laugier, with Lucy Lippard's description of Tony Smith's *Smoke* and Gene Baro's description of Paul Feeley's *Sculpture*

Tony Smith. *Source* (model), 1967



Court. They all stress parallaxic effects of movement, change, variety, and shifting viewpoint.

Soufflot, in a lecture delivered to the Academy of Lyons in 1741, mentions the surprising effect of the triforium galleries at Notre-Dame when seen from below:

*The spectator, as he advances and as he moves away, distinguishes in the distance a thousand objects, at one moment found, at another lost again, offering him delightful views.*¹⁵

Laugier, in his *Observations sur l'architecture* (1765), praises the cathedrals of Amiens, Reims, and Paris for their variety. From the transepts of these churches,

*one sees a charming composition, as the eye plunges with delight through several rows of pillars . . . a polygonal chevet multiplies these views, making them more varied still; creating a medley, a movement, a tumult of spaces and masses, which play and contrast, and have an entirely ravishing effect.*¹⁶

Lucy Lippard is charmed by similar effects while walking past the pillars of Smith's $24 \times 34 \times 48'$ *Smoke*:

*The patterns of space and patterns of linear solids change as one moves through it . . . the eye is constantly led away into new configurations. Each new view challenges imagination and perception, opening up new geometrical vistas before the previous group are forgotten, so that ones experience takes on an almost musical dimension.*¹⁷

Gene Baro evokes a similar "melody of transformation" in his description of Feeley's *Sculpture Court*, a set of squiggly slabs 21 feet high, which occupied about 100 square feet when they were erected in the light court of the Guggenheim Museum this year:

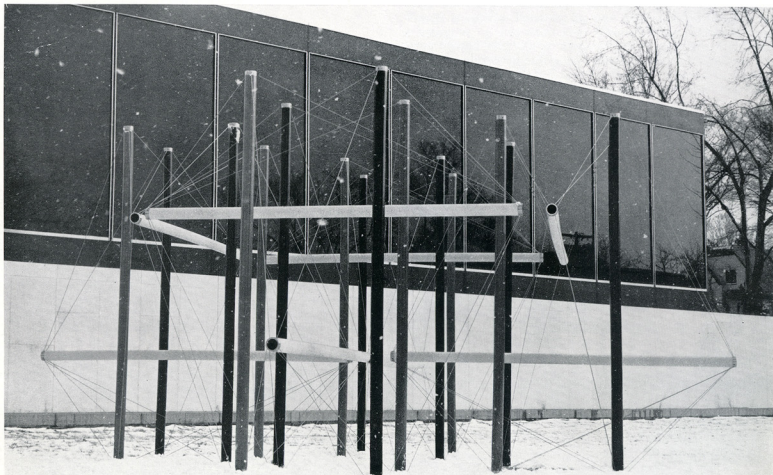
*Wherever one moves, up or down the Guggenheim ramps, or among the columns themselves, as one is meant to do, one's sense of the sculpture changes. It unfolds a multitude of impressions; the mood of the work seems to shift as one walks around or through it. Yet one realizes, in the moment of experiencing these splendid differences of view, that the 'Sculpture Court' is stillness itself, its forms unwavering and contained, its essential relationships immutable.*¹⁸

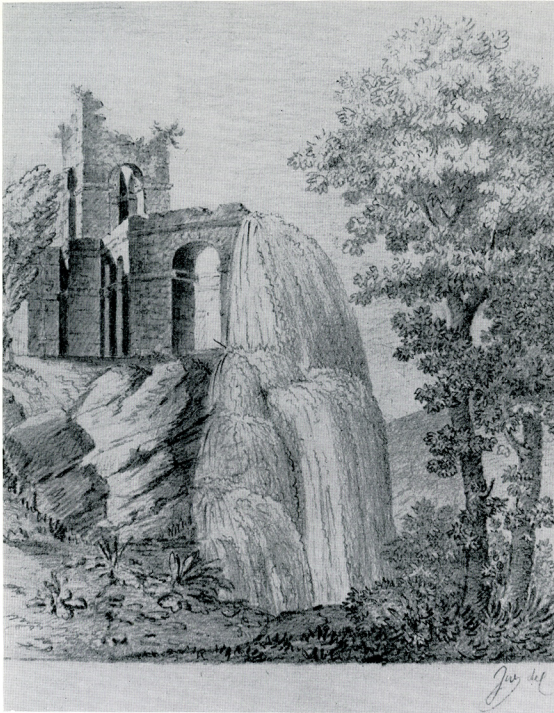
Robert Wood must have felt very much the same way in 1751 while he was visiting the ruins of Palmyra. "So great a number of Corinthian columns", he wrote, "mixed with so little wall or solid building, afforded a most romantic variety of prospect."¹⁹ It is not surprising, then, that *Smoke* has been dubbed "a kind of contemporary octastyle"²⁰ and that *Sculpture Court* has been called "the mid-twentieth century equivalent of the Greek Temple—a Parthenon for the present".²¹ These modern ruins also provide "a most romantic variety of



Marc-Antoine Laugier. The Primitive Hut (frontispiece to *Essai sur l'Architecture*, 1755)

Kenneth Snelson. *Untitled*, 1968. Porcelanized aluminum; each unit $12 \times 12 \times 12'$. Photographed at the Albright-Knox Art Gallery, Buffalo; by courtesy of the Dwan Gallery, New York





Heinrich-Christoph Jussow. Sketch for the Aqueduct, Wilhelmshöhe, circa 1790. Collection: Staatliche Kunstsammlungen, Kassel

prospect". They can be appreciated from various points, from within as well as from without. As displayed at the Corcoran Gallery and the Guggenheim, they could be seen from above as well as from below. If sculpture is really approaching the condition of architecture, the next step is clear: the walk-up ruin. The viewer, just as the visitor to the carefully ruined Aqueduct at Wilhelmshöhe near Kassel, will be able to walk up and down at various levels inside the work. If the piece is kept open and quite wall-less, like a ruined temple or Laugier's notion of the primitive hut, the stairways would provide an even greater variety of viewpoints and further enhance one's

pleasure in parallax. The provision of staircases, ramps, or even elevators, controlled by the observer, would certainly increase his activity, but, as long as movement is determined by the viewer and can be reversed for close comparison and analysis of the individual moments of a succession of parallaxic effects, there need be no fear of an end to contemplation.

Pater said that all art aspires to the condition of music. Today, surely, parallaxic art provides "melodies of transformation", but each viewer must be his own musician. He can play each melody as he will.

NOTES

1. For a discussion of the principle of envelopment in 17th-century ecclesiastical "environments" see my article "Visual and Auditory Space in Baroque Rome", *The Journal of Aesthetics and Art Criticism* XVIII, 1 (September 1959), p.55-68.
2. "The Luminous Trend in Kinetic Art", *Studio International*, February 1967, p.72.
3. "Movement in Art", *Vogue*, 1 February 1967, p.170.
4. Paul Cézanne, *Letters*, ed. John Rewald, London 1941, p.262. I am grateful to Francis Hewitt for calling my attention to this passage.
5. *I trattati dell'orificeria e della scultura*, ed. C.Milanesi, Florence 1857. Cited by Erwin Panofsky, *Studies in Iconology*, New York 1939, p.175.
6. *Paragone*, trans. Irma A.Richter, London 1949, p.95.
7. *Lives*, ed. E.H. and E.W.Blashfield and A.A.Hopkins, New York 1923, Vol.III, p.8f.
8. "Illusion and Visual Deadlock", *Meditations on a Hobby Horse*, London 1963, p.157.
9. Peter Collins equates "space-time", as used in architectural criticism, with "parallax" in his article "Parallax", *Architectural Review*, December 1962, p.387-390.
10. *Henry Moore on Sculpture*, ed. Philip James, London 1966, p.278.
11. *Ibid.*, p.271.
12. *Ibid.*, p.266.
13. *Ibid.*, p.274.
14. *The Picturesque*, London 1927, p.195.
15. Quoted by Wolfgang Herrmann, *Laugier and Eighteenth Century French Theory*, London 1962, p.92. Soufflot allowed for a similar effect in his design for the colonnades of the Panthéon. Effects of kinetic parallax were so highly prized during the 18th century that the architect Julien David Leroy anticipated the effect from engravings of the project even before it was realized. He predicts, quite accurately, that as the spectator moves forward, "the columns one after another will hide different parts of the decoration. Not only those columns that are near him, but all the others he can see will produce this changing picture" (Herrmann, p.122).
16. *Ibid.*, footnote p.93.
17. "Escalation in Washington", *Art International*, January 1968, p.46.
18. "Paul Feeley", *Vogue*, 1 April 1968, p.180.
19. Quoted by Peter Collins, *Changing Ideals in Modern Architecture*, London 1965, p.27.
20. "Escalation", p.45.
21. "Paul Feeley", p.180.