

CHAPTER 11:

THE SHARED SPACE OF SCULPTURE

> INTRODUCTION TO SCULPTURE AND ARCHITECTURE. THE OCCUPATION OF >> SPACE

Sculpture in the round meets us fully in our own space. What it withholds from us no longer lives on the other side of a canvas, but is what lies on the other side of its own surface as a three dimensional object. Space has grown sufficiently dominant over time that the work can inhabit our everyday space and maintain its spatial properties regardless of what actions we perform in time. This intransigence is due in part to its solidity. Solidity, however, also means the inability to probe to what lies beyond the mask of its surface. It is as if the canvas of the painting wrapped itself around the work's own center into the third dimension. A sculpture's secret is its inside.

It's inherent spatial qualities are wrapped up in itself and are of significant enough interest aesthetically that it is able to exist in the everyday space without its reality being lost or diffused in the vastness of the everyday space which surrounds it. Its frozen materiality allows it to exercise an influence on the everyday reality without being drawn into a nexus of cause and effect with the objects around it which would turn it into merely an everyday object. The result is a partial transformation of the everyday reality, something felt mostly in the immediate vicinity of the work.

Space is commonly defined as the possibility of extension. To this we can add that space is the possibility of being occupied. Space itself is abstract and empty. When space is occupied by an object, that object *uses up* or *swallows* a certain portion of space. Like a public restroom with the sign "occupied" outside, we cannot have access to it at the moment. We are not sure who or what is inside. As the sculpture completes itself in space by rounding back on itself, the space within it becomes invisible. The boundary of the sculpture, seen from the outside, prevents the inside from getting outside, holding it in. Sculpture is a mask behind which we assume space hides¹.

Empty space, like a vacuum, is invisible. Only when space is occupied is anything visible. However, it is not space itself that becomes visible, only its absence. The object erects a barrier to further inquiry inwards, its surface reflects back our attempts to see further within. If an object is opaque, the only part that we can see of space is the boundary between the occupied and unoccupied portion. The object defines a shape in space by delimiting it. The sculptor makes a statement about the difference between unoccupied space and occupied space by showing us the boundary of inside and outside.

At the boundary between the inside and outside, what we really see reflected back to our eyes is the impossibility of seeing further in. We have no idea if the object is solid throughout, hollow throughout, or hollow in some parts and dense in others. It may be a Trojan horse. There could be, unknown to us, other objects inside it. We will never know because time will not bring about a

change as nightfall did in Troy. Our sense of how the shape of a sculpture occupies space is based on our perception of where that shape ceases in space.

We assume that space, as we know it, continues inside the object, but ultimately we do not know whether what is withheld from us is even still of the nature of space or a reality of a different nature. Do we know for a fact that space itself continues within the object or only the implication of space? We will never know because if we remove or destroy the object everyday space will flood in and we will never know what had been there. The only object of which we have intimate knowledge from the inside is our own body. The duality of inside and outside, mind and body, is more to us than a philosophical idea, we *live* it. There is no common terms with which to reconcile the two. Our body is in space, our mind is no-where in space, yet it endures in time. If there is an inner secret to sculpture would it too be time? Is that where space has caused time to hide? A provisional answer is given to this question by architecture, but in a way that only delays by one more stage its final solution. The inside of the sculpture is opened up in architecture, and we are allowed in. What we find there is simply more space. However, if we look at the very center of architecture what we find is our own self, which leads us inwards into the time and duration of our own existence.

A sculpture therefore is an object whose inside is a mystery. Its outside, its visible part, establishes the existence of this mystery, and by its form is suggestive of what may lie beneath. Sculpture seems to push out into our space from the hidden seed of space within it. Sculpture raises the philosophical issue of what is the heart of space: what space becomes at the moment it becomes occupied and we can no longer see it. Inside the work is something swelling into three dimensions from an unknown center. This secret manifests itself spatially in the burgeoning shape. In contrast, the painter can depict the inside of an object on its outside, s/he can show the inside and the outside at once by superimposing them on a single plane, by collapsing the layers of the work into a single layer that shows as the outside.

Architecture proposes a possible answer to the question about the inside that is raised by sculpture. What, in the sculpture, was the boundary between inside-outside, which kept us from probing within, in architecture becomes the same boundary, but seen from within, and which in turn withholds behind it the outside. In this sense, outside is now inside. The space within architecture is the topological inversion of the space of sculpture. Seen from the outside, a work of architecture is like a work of sculpture, and what differences remain are more a matter of scale than anything else.

Are we en route to architecture if we cut away into a sculpture to find out what is inside it? We tear away at the object, looking for its inside, shred it into smaller and smaller pieces. However we never seem to find an inside, just more space, more outside. What was before a genuine inside, because it was hidden and effloresced into three dimensional form, is now only a newly exposed portion of the outside, relative to which is still a further inside. Perhaps this is why it can be so disconcerting to see a surgical operation: to find space where previously we thought resided inner spirit. If we probe far enough, as does Henry Moore, a hole finally occurs. Going the furthest in only reveals the original outside: that if we probe too far into the reality of the *within*, the within will disappear, and we are left with, at best, a new appreciation of the outside.

When we enter a work of architecture we learn that the solidity of the sculpture was relative. There was just a boundary which separated two complementary universes. Sculpture and architecture are alike in that both are empty reflexively. We see a sculpture because the space outside it is empty. We see a work of architecture because the space inside it is empty. The architect sculpts out an interior space by pushing its boundaries outwards, the sculptor by pushing boundaries inwards and locking shape within it. In both the boundary defines its shape. Unlike painting and sculpture, the architectural space is an available space. The architect is more at creating a space while the sculptor is more at creating an object, though both descriptions apply to both artists.

While sculpture shares a common space with us, architecture preempts the everyday space, puts itself in its stead, so that we are in *its* space and not the everyday space. There is already a tendency to this in a very large sculpture parts of which can surround us, or when we are in an environment surrounded by different sculptures. Painting created a space and simultaneously populated it with content. A painting was an entire space unto itself that can contain many objects. A sculpture is a single object in a larger space that is not itself². The object in the painting lived in a space created by the painting, the sculpture must use the space around it. The artistic space has shrunk to the immediate area around the work.

With a temporal work of art, the possibility exists of our interacting with the work and changing its temporal qualities (the way it continues to evolve internally through time). In contrast, the responses of sculpture to our attempts at interaction are limited to changes in space alone due to perspective. It is in fact not a true interaction in that we act but the sculpture does not. Its internal form, its form relative to itself, is not affected.

Although there is usually a difference in dimensionality between a painting and a sculpture, it is not the abandonment of two dimensions and an approach towards three dimensions that in and of itself distinguishes sculpture from painting in terms of their use of space. The key criterion lies in the sharing of a common space. A spatial work of art could be in three dimensions but still be disconnected causally from our space, while we can reach out and touch a sculpture. It is the rigidity of the sculpture that allows it to be involved in our reality without fear of significant spatial modification.

The progression therefore of the spatial arts on the spectrum goes from isolating space from human interaction, to embracing everyday space, to turning that space inside out. Apparently before we can enter the work's space, first it must enter ours.

> FRONT AND BACK

In addition to hiding its inside, because we are three dimensional creatures viewing a three dimensional object, the sculpture's front is always hiding its back. It is almost as if we were engaged in a dance with someone who for every move we made, made a corresponding move to keep one side of h'er out of sight. We must move around the sculpture to see its full extent in space. In this way the work's space controls our time. It lures us on to something new, but then denies what it has already given. We are left to be a satellite orbiting its parent body without every seeing it in its entirety. This dance of perspective almost brings the work to life for if we can forget that it

is we who are moving, we might believe that the work is doing the moving. Sculptures as objects present an eternal front to us; the eternal back is never seen³.

The painter can choose a view of an object that, because it can never change, can stand for the totality of that object. The sculpture can promise but we can also find out whether that promise is kept. What was perceived before we moved, and which is no longer visible, is not lost into time. We can continue moving until it comes into view again. Our experience of its wholeness spatially is fragmented into time, though at any one moment it will seem whole in its two-dimensionality. We never actively find out *how* the work completes itself in space, it is always by implication. We never see just where it finally rounds back and joins with itself. Only retrospectively, deductively, can we conclude that it is completed in space.

The back-side is withheld from us for the same reason as the in-side: sculpture completes itself in space by rounding back upon itself into the third dimension. In this act it simultaneously cuts off its inside while separating its front and back from simultaneous view. It is not the distance between the two that prevents us from seeing front and back at once. It is the roundness or fullness in between. Distance, as something that prevents us from seeing two things at once, only becomes a factor in the vastness of architecture. Sculpture basically curves away from us from where we are standing, and becomes opaque to itself. One way we could see front and back of the sculpture is if we could peel off the surface and splay it, spread it out to the sides, like a map projection of the globe. What would then be missing? It is the very "occupation" of space, its hidden-ness, that is a chief aesthetic of space in sculpture. The map contains all the original information about the sculpture, but minus its presence in space, minus the implication of an inside.

> MORE ABOUT SPACE IN SCULPTURE

> THE WORK HAS AN INFLUENCE ON THE LOCAL SPACE AROUND IT

Sculpture wraps itself around (inner) space as it wraps (outer) space around itself. Its form effects our behavior in the space near it by causing us to move around it in an orbit whose shape is influenced by its structure. The shape of the sculpture is the boundary at which it pushes everyday space away from itself and at which everyday space pushes inwards towards it⁴. The surrounding space may be thought of as pressing inwards causing the sculpture to assume a form in defense of its inside which it doesn't want to reveal in spatial terms. As a result a dynamic equilibrium is attained. It is *within* its boundaries that a sculpture is most likely to exert its greatest influence, analogous to the deformations of space that may occur within the black hole. However, this part of its space is withheld from us. We can sense what it is doing internally only indirectly by the way it pushes outwards against its boundaries. The sculpture thus has a more communicable influence on the space that lies outside and around it, where a negotiation goes on between the everyday space and the artistic space. The latter purposefully participating in the former so that the former will be affected by the latter. It is as if the sculpture is a magnet and is surrounded by invisible magnetic lines of force, which exerts an effect on the everyday world near it. Sculpture is often the loyal dissenter who says "this is as reality should be" or "this is what is the true nature of reality".

The surface of the sculpture is not only the outer limit of the work's form, it is also the limit to which the everyday space extends towards the work, imparting to external space a reflected shape as it echoes off the sculpture's surface. On one side is the intended shape of the sculpture while on the other is the passive shape created by the intrusion of the sculpture into the everyday space. In this sense the sculpture sculpts the air that surrounds it. If we were talking about a terrain of mountains and valleys, the form would effect how the wind currents flowed around it. As it is it refocuses or re-channels how our sight moves through the space in its vicinity.

> THE APPREHENSION OF THE UNDERLYING SINGLENESS OF FORM. THE
>> ROLE OF TOUCH IN SCULPTURE

If at any one time we are limited to a single perspective of a work of sculpture, how do we then derive a sense of the unity of the work's presence in three dimensional space? Only our eyes have direct access to the painting space, but all of our senses are in the same space as a sculpture, though sculpture only addresses two of them: sight and touch (although there may be a custom which prohibits touching works of art, the restriction is arbitrary from an aesthetic point of view and limits our exploration of how time and space function in that aesthetic). Touch is a sense that has not had a significant primary role (see chapter one) to play so far on the spectrum.

Any art that involves sight can provide ideated sensations of touch, but only two temporal arts and two spatial arts can provide touch that is not ideated. If a dance, or in a theatre play, if we go from being a spectator to being a participant, there can be moments when we physically touch the performers. These may be brief moments, and not generally the norm, but they can be among the most intense moments of the work, expressing a heightened state of movement or action, a need for physical union or a desire to interfere. The two spatial arts are sculpture and architecture. They exist primarily as a physical, material presence, and contact with them is not a byproduct of other more important conditions, such as action or motion, but occur whenever we wish.

For sight, wholeness is expressed only negatively, by the portion we do not see, which acts as a constant implication of the third dimension⁵. The work's wholeness, if not present in the current moment, at least engages us in a continuous dialogue through time, as we try to investigate its full presence in space. The leading edge of this dialogue is the point where the work, regardless of where we stand, rounds away from us into the third dimension and disappears.

For touch, wholeness is in space expressed positively as a simultaneous experience. While the eye can only be at one place relative to an object, the hand can surround an object from all sides. We feel matter bulging outwards or shrinking away. Touch receptors exist everywhere on the surface of the body. We can take a ball in our hands and simultaneously be in contact with it almost everywhere on its surface. Our hands thereby assume a role of a negative image of the sculpture's own surface. The hands surround and in the process keep the sculpture hidden. The outside of the sculpture is promoted to the nature of an inside, but the nature of the inside is reflected back into our own interior, which is known to us directly through affective states.

With low relief the situation is different regarding touch. It is like raised Braille. While Braille exists to be transformed into verbal meaning and concept, low relief exists to be transformed by the

eye into an implied three dimensional reality. If we seek the relief's represented full form through touch, the form disappears. Only through sight, minus touch, can its implied form be apprehended.

We do not have to directly handle a sculpture to evoke the role of the sense of touch and have it accommodate the whole of the work. If we stand far enough from the work, by extending our hand away from our body we create the appearance that the sculpture will fit into our hand. All that is required is that we do not actually squeeze our hand together to feel the object. If we do the everyday space schisms into two spaces, one where our eyesight told us our hand was relative to the sculpture, and the other where the image of the sculpture apparently lives.

The brain is used interpreting all instances of the same object, regardless of their distance from us, as *looking* about the same size. When driving on a highway, the cars a mile ahead seem no different in size than the cars near to us, unless we stop and consider the amount of the visual field they occupy. This ability to change the "size-feeling" of an object can be put to use in the opposite way. Regardless of the absolute size of the sculpture, we can imagine that it has a size that will fit in our hand. The sculpture is something, that potentially, without robbing it of its form, can be held by us, touched simultaneously on all sides, held, surrounded, embraced. We can imagine a very small object growing in size and expanding into our hand, or a large object shrinking until, instead of our being able to touch just a part of it, we can hold all of it.

As long as in certain situations we do not force this test of actual versus ideated sensation, touch will always form a large component of the experience of a sculpture. If I am contemplating a mountain vista I can take my hand and sweep it against the outline of the mountains against the sky. This gives me an amplified sense of power, as if it were I who, with the hands of a giant, were shaping the mountain, scooping it out of the earth and giving it form. I become the ideal sculptor working directly on nature as my medium, dealing with huge masses as if they were toys.

The difference between actual and ideated sensations of touch is important. If we get close enough to a sculpture we are confronted with a surface whose feeling to touch may not coincide with what our ideated senses of touch thought it would feel like. If it is a statue⁶, cold and unyielding metal or stone belies ideated expectations of warm and yielding flesh. In painting, if we actually try to touch an object, it dissolves into a colored surface with no depth. Objects in painting only appear real if they remain outside our space. With sculpture, instead of a totally different reality we are confronted with an equivalent but competing reality. Sculpture cannot hide behind illusion as did painting but leads a curiously dual life being like and not like

> IMPLICATION VERSUS WALKING AROUND

How a sculpture appears from one side suggests how it might appear from another side. One side gives us an intuition about its entire form. The other side, if we see them, may live up to this initial intuition. Sometimes, though, the other side is so different than what we expected that we are reluctant to consider it as belonging to the same object. Even with a figure as familiar from all sides as the human body, we can be surprised that two photos, one of someone's front and the other of someone's back, indeed belong to the same person. We can have the same reaction when we look at a person facing us with a mirror behind them. We see their front and see their back, but other than the theoretical unifying premise of the mirror, there can be a feeling that "these two parts don't

belong together"⁷. Painting can imply things about the unseen sides of objects, without ever having to stand up to the test of confirmation. A sculpture must live up to, ignore, or purposefully contradict the expectations it arouses from the front. Who knows but the other side of this nymph resembles the medusa. The fact of continuous material extension does not of itself lead to a sense of cohesion among different views. If, however, I could slowly walk around the person, each new part that comes into view is synthesized with what I have absorbed so far. In this gradual fashion, as new is absorbed into old, a consistent whole emerges, a whole that requires the work of time, and which would fragment again if left to discontinuous views in space. In sculpture, there is an ongoing counterpoint between implication and fact, expected and unexpected, future and present. One can even think backwards in time as to whether what we just saw "fulfills" what we see now were we it next instead of before now.

> MORE TOUCHING ON PERSPECTIVE

By moving into the same space as the viewer, sculpture unveils a form of plasticity not available to painting; its shape changes, almost as if being molded by us, as we move around it in space. One perspective flows into another in a harmonious continuity. Our view of the painting-space was limited to only what showed in the frame. As long as we view a sculpture from just one side, though it can be complete as an aesthetic experience, we have not placed the work entirely into our own space. If we do not watch the work continuously as we walk around it the changes in perspective will be abrupt, which can turn the experience back towards painting, or in this case, multiple paintings, though we cannot set them side by side in space for instantaneous comparison.

A sphere viewed from any position will always have the same appearance. Having the ability to see it from all sides yields nothing additional. It is as if we never moved at all⁸. An ovoid viewed from different positions will remain ovular but the ratio of the lengths of the three axes will vary. These are examples of varying degrees of constancy in the face of change. Other forms will vary more widely due to perspective, some so widely as to make it difficult to intuit the constancy of its underlying form. In general, there will always be a counterpoint in time between what is changing due to perspective and what is not.

Some sculptures, by their architectural setting, may intentionally limit from what points of view they can be observed. Even when surrounded by empty space we rarely see someone crouch down to obtain a view from below. Such behavior may be considered socially bizarre, though artistically it is perfectly valid. Rodin's Balzac broods over us, it is meant to be seen from below. The necessity for sculptures to sit on a base, and thus not be seeable from a vantage point under the base, is an artifact of gravity. With proper technology, we could allow a work of sculpture to be viewed from any position in space relative to it⁹.

> COMPLETING THE CIRCLE: OLD OR NEW?

If I look at a two dimensional circle printed on a page of a book, I grasp at once that by following the circumference around I will return to my initial position. I also understand how the starting fits into the entirety of the circle. The certainty of these facts goes away when I do not see the entire circle at once, or the object is three dimensional. What happens the first time I finish walking around a sculpture? If I keep track of my position in the everyday space relative to the object I will

know just when I am about to return to the initial position, and I find nothing surprising in seeing what I saw originally when looking at the sculpture from that position. If, however, I lose my awareness of where I am in everyday space relative to the sculpture, when I see a second time what I saw before, it may come as a surprise, seeming too early or too late. It may also seem to fit incongruously with what I saw the moment just before finishing the circle¹⁰. In these ways the old may receive the hue of the new. When completing the circumambulation, the old has become the successor to the new. Eventually everything that is new becomes old. The initial experience of development in space through time leads to where I was. The role of time to bring upon change has subsided.

> WAYS OF TRYING TO REVEAL THE INSIDE

Though the inside of a sculpture ultimately remains a mystery, it does not mean that a sculptor cannot engage in the process of trying to reveal it. This may account for the eaten away surfaces and holes in many modern sculptures. They try to probe the boundary line where visible and invisible mix. Whether by pitting, incising, wearing away or scooping out, the result is that a portion of space previously hidden is made available, but only by making it empty and thus in effect turning inside into more outside. The inside is not revealed *as* inside. On the other hand, if there is an indentation to the surface of the work, surrounded on all sides by higher elevations, our sense of the work's overall form may skip right over the indentation as if the latter had been filled in and brought even with the surrounding material. For instance, if we see a cube, and there is a chip gouged out of one of its surfaces, we still see the overall form as a cube. The missing portion is seen in two different ways: as part of the surface of the work as a whole and therefore *outside* the inner space of the work; or as contained within a broader outline of the work and therefore *inside* that outline. A continued attempt to reveal the inside will ultimately lead to the removal of so much material that the sculpture itself vanishes.

What if we take an x-ray of the sculpture? If we think of an object as being like an onion, then the x-ray is a device that allows us to peel away a number of the outer layers, so that we can see the *outside* of one of the inner layers. Touch offers a more promising avenue towards experiencing the inside. If the sculpture is made out of substance that will yield to the pressure of our hands, we can move them inward until surrounded by the sculpture's material. What we touch is still an outside, but because it is not visible to our eyes, which remain completely outside, there is more of a feeling of being on the inside than is available to sight. There could be an installation consisting of many flaps of cloth, closely spaced, each long and relatively narrow, hanging from the ceiling. If we move among them the experience would be different than moving around in the emptied out inside space of architecture. It would retain a feeling of outside as well as inside. Our experience would live closer to the boundary of inside and outside¹¹.

What if the work were transparent? Wouldn't that not only make the inside visible but would also overcome the second of sculpture's two primary strictures, that of not being able to see the front and back at once? If the work were totally transparent we would not be aware of its presence at all, it would be like looking through air. The material would need to be partially transparent and partially refractive. We would be aware of its surface because it reflects light, while at the same time affording us a view inwards due to its refractivity. The opposite side of the work, to the extent we could see it, will appear to be contained *within* the front side, as if projected upon the front, having

the vaguely ghost-like appearance of one of the objects in a double exposure photograph. It would also be that side's inside surface that would be visible. We will see back and front at once, but not the back from outside inwards. The inside meanwhile remains invisible, no longer because it is blocked by the opacity of the surface but because it transmits light through itself without reflecting any back¹². We are not aware of the shape of the inside as seen from the inside. For this we have to wait for architecture.

> LIQUID SCULPTURE. ADUMBRATION OF A NEW ART

In water fountains and water falls, if the water pressure is constant, permanent shapes are created that paradoxically are made up of constantly renewing material. If the pressure is not constant we have an example of a three-dimensional work of art that changes shape through time without any change being required in our viewing position. This would seem to adumbrate the existence of an art not discussed in this book, one that would be located midway on the spectrum between animation and dance. It would share with three-dimensional animation the abstract evolution of shapes through time. It would differ from animation but share with dance that the work exists in the same space as we, so that we can interact with the work if we chose and thereby effect its future evolution. It would differ from dance in that the object changing shape is not the human body but more like those we would encounter in a work of animation.

> TWO THINGS OCCUPYING THE SAME SPACE (AT THE SAME TIME)

In the everyday world, two solid objects cannot literally pass through each other without one or the other being broken, distended, or otherwise losing its shape. In sculpture, time has already happened and is now frozen. It does not matter that it is physically impossible to cause objects to enter each other, all that is necessary is that we represent what the result would have been like if they had¹³. A sculpture, for example, can look like a cube and a sphere that have partially passed through each other, as if neither had had resistance to each other. We will not see how they got to be this way, and we will not see them merge any further.

> MISCELLANEOUS

The space in which a sculpture exists is not born with the work but preexists it. In film and painting the work appears only in front of us. This is true of sculpture too, we must be facing it, but it changes with architecture, which extends all around us. To contrast architecture with sculpture, we can say that if in architecture the building exists all around us at once in time (or despite time), then with sculpture, we can say that given enough time we can exist all around the work.

Sculpture frames itself. It does not require a frame.

Painting could maintained its reality in distinction to the everyday reality because it existed in a protected space. Its reality would have dissolved if it became fully a part of our everyday space. Sculpture does not need this protection. If painting exists in a separate reality from ours, then we might think of sculpture as also growing from a bud that is outside our reality but which blossoms into our reality.

Sculpture is not always in the round, it can exist in any degree of relief. This suggests that it can exhibit fractal dimensions between 2.0 and 3.0. Sculptures that barely rise off a background surface are closer to 2.0, while a statue almost in the round, attached in just one place in the back for support, is closer to 3.0.

Holography can be distinguished from sculpture on the basis of it not being in the same space as we are. The proof is that if we try to approach it and interact with it, it does not act as an object linked causally with ourselves. It doesn't offer resistance to our touch. If we stand in certain places, we may block the formation of the image and it will disappear.

> TIME, IN SCULPTURE

With sculpture, all that *can* be seen in the space of the work is not visible all at once in time. This is a restriction imposed on time by space that did not apply in painting where we could see at once all that the work would ever reveal of itself spatially.

With sculpture, as with painting, regardless of when we show up in our time to see the work, we encounter the same exact time in its history. With painting, there was at least the possibility that time continued on, only we were not privileged to experience it because its space locked us out of its reality more thoroughly than the space of animation or film. With sculpture, there is no insurmountable boundary between its space and ours. Its time therefore should be available to us without limitation. If it isn't, it is because with sculpture time has truly been slowed down in space until it stops. Near a sculpture time seems to cool down, while further away from it the everyday reality takes over with its hustle and bustle. If we are in the middle of an environment populated only by statues, then we appear as the exception time-wise, these visitors to our everyday space having usurped the everyday time. Like the special effect in science fiction movies, a magic button is pressed, and all activity ceases except our own. The sheer immobility of the statue is a challenge to our own sense of continuation in time. If we are to truly interact with it, and be in temporal step with the statue, we must still our time until it stops. Otherwise our time vanishes off the surface of the work, evaporating invisibly and leaving space behind unchanged.

If we would have presented to us all the perspectives that are possible of the three dimensions of the sculpture, it would require that we see first one and then another, which requires time. Because the number of perspectives is endless, it would require endless time. In this way the space of the work extends our time.

The fact that sculpture is immobile does not prevent it from seeming to be on the *verge* of motion, or to seem as if it has *just* stopped moving. Only the present in time contradicts these possibilities. Somewhere between an irretrievable past and a future that will not come, lives a present that still mediates between possibility and possibility. The future may keep trying to eventuate, but it keeps on being deposited back into the work's present.

The past may seem ever so close to the present but never quite connect with it. At some point in the past, during the last phrase of the creation-time of the work, the work attained its final form. For us, during the experience-time, the moment when the work came to rest in its current form does not drift further and further into the past, but lives always equally beyond reach.

There are films that include scenes where a human actor dancer dances with an inanimate object. If done well, the inanimate object seems to move of its own accord, something akin to the feeling we have about the ventriloquist's dummy or a puppet. This feeling of something being partially alive, though inorganic, is key to the perception of sculpture, where a breeze of time still haunts the surface of the work.

Earlier in this chapter we spoke about the dance of perspective that the sculpture engages with us. This leads to certain subtle suggestions of motion. If a sculpture resembles something which in our experience we have seen in motion, we may have ideated sensations of that motion occurring.

The viewer never stands absolutely still. There is always some vibration or hint of motion in the body which causes subtle and continuous changes in perspective relative to the sculpture. If we are unaware of these motions, we may attribute the resulting subliminal changes in the statue's appearance to changes occurring internally in the statue and not to us.

When speaking about dance we said that when motion connects two places in space, the identity in space of those places is less important than the nature or quality of the motion which effected their connection¹⁴. There is an analogy to this in sculpture. The "quality" of connection between places in the space of the work can be thought of as the "way" the material of the sculpture twists and turns, altering its form, to bring its substance from one place to another. It is a motion so purified that before and after have drawn together. If it 'gets to' somewhere, it does not do so 'after' it is somewhere else. It is motion without 'becoming'. The substance of the sculpture keeps moving into itself. [illustration: Arp e.g.]

The folds and bulges on the surface of a sculpture create the appearance of a matrix of two dimensional lines. As I move relative to the work, various pairs of these lines appear to draw closer to each other or move further apart. As a result of the same cause, parts of the sculpture nearer to the eye move more rapidly against parts further away. For similar reasons a statue may beckon to me because it seems to have turned its head a little towards me as if it has become aware of me. As I am lulled by the work's stillness in time into a contemplative mood, I become less aware of my own physical presence in space and my own movement within it. Only when I return fully to the everyday reality will my common sense say that "of course it was not the statue that moved but me." . Somewhere in-between these two states, I can be aware of my own movement, but if I do not have an accurate real time understanding of how the rules of perspective geometry work, I may still attribute these apparent motions to the internal movement within the statue itself.

> SCULPTURE AND THE OTHER ARTS

Wherever we take up a position in space the objects in that space shape themselves around us according to perspective. We cannot move without a new arrangement taking shape. By our actions we perform the activity of a sculptor in the process of making a work.

> SCULPTURE AMONG THE SPATIAL ARTS

We basically stand still when viewing a painting, moving only in limited ways as we continue to view it, but not so that it significantly changes its appearance. The painting spreads somewhat to our left and to our right, it spreads up and down. It tries to extend enough to surround us but fails. With sculpture, the possibility exists for us to march around the work and, in that sense, surround it. Architecture quietly marches around us and surrounds us thereby. In the case of sculpture, we can walk around the work because of time, but we can never surround it because of space. Architecture, in spite of time, surrounds us.

To walk around a sculpture is ultimately to walk in a circle. It incurs the limitation that a dog, sometimes unwittingly, incurs when it is tethered by a rope of fixed length. It may explore space in what it considers to be a continuous and free manner, but its range of motion is eventually restricted to the area of a circle. The sculpture is fixed in position, and in exploring it, keeps us on a spatial leash. As with the moon, which constantly tries to veer off at a tangent to its circular orbit to pursue its own linear course through space, our efforts of movement through space in the vicinity of sculpture are constantly coerced inwards towards the work. Our motion leads eventually back to where we started. With neither painting nor sculpture do we walk through the work and become a part of it, a part of its inner spatial reality. This happens with architecture.

> SCULPTURE VERSUS PAINTING

> WHAT WE CAN SEE, WHEN

The painting manifests itself outwardly in a space that we cannot access. A sculpture manifests itself outwardly into the everyday-space which we can access, but it manifests itself inwardly into a space which is inaccessible. Until we move relative to the sculpture, it is somewhat like a painting because we have but one perspective on it. In painting, the implication of its space continues beyond the borders of the canvas, in which it may contain an extension of the content within the frame. In sculpture we actually see the space beyond its borders (its surface) and cannot imply anything that it does not actually realize within its form.

The scene depicted in a painting opens up to us as it recedes further away from our viewpoint. A sculpture closes up to us as it recedes inwards.

If we see parts A, B, C in the painting in that order, the next time we look at the painting we can see them in any other order (BAC, CAB, etc.). Not for long do the relationships of parts bear the stamp of temporal order in a spatial work of art. Eventually they are neutralized. In sculpture, though the same applies within the portion of the work that is currently visible, a certain order must apply as we go around the work, unless we stop looking at the work while in motion around it.

> TOUCH

If we touch an object in a painting, the illusion of it being a solid object in a separate reality is lost, because we experience contradictory information from sight and touch. If we touch the sculpture, at

most only part of the illusion is lost. The solidity remains, only the nature of its material may be contradicted. We gain more than we lose. We directly sense its three dimensionality as we feel the convexity of its swelling into our hand or the concavity of its recession away from our hand.

In painting touch was important but was stimulated in ideated form by the primary sensations of sight. We can still have ideated sensations of touch stimulated by sight when looking at a sculpture, but we can also directly touch the work. There is thus a duality with regard to touch in sculpture. The eye will make a surmise about what something will feel 'like', and actual touch will either confirm or contradict this. In which do we invest our sense of the nature and reality of the work? To confirm the illusion of a human reality in a statue, the sculptor would seem to rely mostly on ideated sensations.

> PERSPECTIVE

The painting determines from what angle we see things, we determine from what angle we view the sculpture. In painting, there is nothing the observer can do to change the spatial relations of one part to another due to their apparent relative position in space. In sculpture, by moving in space relative to the work, different parts of the sculpture change their spatial relation with each other. Parts can be made to eclipse others or reveal others formerly unseen. Parts can even exchange which is left or right of the other. The three dimensional presence of a sculpture can be represented as the sum of an infinite series of separate paintings. A painted sculpture can reveal an endless series of overlapping paintings.

> SEGUEING FROM ONE TO THE OTHER

Being solid, a sculpture has surfaces, surfaces which can coincidentally be painted. Sculpture creates possible canvases, but rarely flat ones. In that three dimensions contains within it two dimensions, we can say that sculpture "contains" painting as a possible aspect of itself. This however has little meaning aesthetically.

In sculpture it is as if the space of painting expands and then joins itself at its edges by bending the painting in the third dimension - which until that moment was unknown. The right end is made to meet the left end, the top the bottom. Lastly the space of the painting is made to turn inward upon itself and enclose itself.

If the painting became three dimensional it could no longer contain the illusion of a three-dimensional reality separate from the everyday reality. If it is not important to maintain that reality as being the unique reality of the painting, the painter can begin to build up pigment on the surface of the canvas and have the latter take on a life of its own. The pigment begins to be molded as if a sculpture, rising as a relief from the canvas.

> DIFFERENCES DURING THE CREATION PHASE

The sculptor takes matter and re-forms it. The painter creates matter as well as its form. The painter, to manipulate the form of matter, applies and manipulates pigment to an already existing

two dimensional surface. The sculptor, to manipulate the form of matter must manipulate matter in three dimensions. The painter by affecting only the surface, affects the entire form.

The painter will sometimes paint first one part of a canvas and then another one disjoint from the first. The sculptor can sometimes mold the entire work at once. Like the photographer, the sculptor can begin with the total subject matter. As with the photograph, the process in time after the inception of the work is sometimes not accessible visually to the artist until it is finished (e.g. taken out of a mold). However, the sculptor can also build up material bit by bit like the painter, joining and extending material. Sculpture can either grow or shrink through the time of the creation phase.

> IN BETWEEN THE TWO: BAS RELIEF

Certain works of sculpture may be so positioned in the local everyday spatial environment, that there may be a restriction on our being able to circumambulate it. It may be up against a wall, for instance. This restriction, however, is a coincidence of the clutter and content of everyday space, not a theoretical or ideal limitation. The work could always be so moved, or other objects around it so moved, that one could have access to space on any side of it. This is not the case with the bas relief. Something more fundamental space-wise is at work. We are not meant to walk around it or view it from the side. We have the ability to move around it, but as with a painting, it will reveal itself only as if seen from a certain point of view.

> STAINED GLASS

Like painting, stained glass portrays a space inaccessible from our space. Unlike painting, and like sculpture, we have access to it from both sides. Looking in from the outside, the work is not gone, it is still there. We do not see the blank backside of the canvas. If the outside is dark and the inside is brightly illuminated, we obtain the same effect as we would inside the darkened church with bright sunlight streaming in. The thin stratum of the work, which holds a reversible artistic reality, is a divider between an everyday reality and an everyday reality. The purpose of seeing through it is not to see to the other side, but to allow the outside to bring to life the work

> IKEBANA

Ikebana and flower arrangement in general is the "musique concrete" of sculpture.

> OTHER

The content of a painting is not exhausted by describing only what lies within the frame since more is implied in its space beyond the temporary boundary of its frame. The content of a sculpture is exhausted by what lies within its boundaries, but its influence on space itself can be felt beyond its borders. In a painting, if the painter wishes to convey that an object is giving off an influence, s/he can depict the surrounding objects in such a way as to emphasize that they are reacting to the effects of the presence of the first. In sculpture, we must be sensitive to how the objects in space around the sculpture reflect back its influence.

The sculpture attempts to detach itself from our space and make itself into something of its own, but cannot, because the everyday reality won't let go of it. The everyday reality denies the work an exit, while in painting the everyday reality itself is denied entry.

The painting has but one front to show us, the sculpture has an infinite number.

The light that shines on the objects in a painting derives from within the space of the painting, and only secondarily from the lighting in the room in which the painting is displayed. The light that shines on the sculpture is usually the light from the everyday environment, though a sculpture could be constructed to be lit from within (a lampshade would somewhat fit this description).

> SCULPTURE AND THE TEMPORAL ARTS

Near the beginning of the temporal side of the spectrum came arts that created space (poetry and dance). At the beginning of the spatial side of the spectrum, painting in effect creates space by creating the illusion of one spatial reality within another. Sculpture uses, more than creates, space. So did literature at a later point on the temporal side of the spectrum.

> VERSUS DANCE

There are three cases on the spectrum where it is tempting to compare a particular spatial art with a particular temporal art. One was when we noted that photography and film use the same technology in spite of which, from the point of view of time and space, the aesthetic results are very different. Yet each frame of the movie is itself a de facto photograph, which from the point of view of time suggests that a photograph is a subset of a film. It is also true that the positions of film and photography are symmetric with regard to the center of the spectrum. In a similar fashion we can now look at a dance, and say that at any given instant in time, the position that a dancer is in is a de facto sculpture, and that once again from the point of view of time, if not space, sculpture could be considered a subset of dance¹⁵. There is also again a symmetry of the positions of dance and sculpture with regard to the center of the spectrum: they are both midway on their respective sides of the spectrum. Later in the book we will take note of some curious similarities between music and architecture despite their being so far from each other on the spectrum. Once again their positions are symmetric with regard to the center of the spectrum.

Our everyday life is spent in an environment in which there is a complex mixture of things that are moving and things that are not moving. Certain things in motion are always in motion, for instance flowing water. Certain things, though they are in motion, move so slowly that we do not usually detect that motion. The sun's motion across the noon sky is an example. Certain things at rest remain at rest, for instance a rock or a house. Certain things that are presently at rest can be put into motion through an outside agency: we can throw a rock or open the door to a house. Certain things presently at rest can move of their own accord, and in doing so express independent will: a dancer is an example. Things that move of their own accord can also be moved as a result of outside forces.

Stasis lies within motion though motion does not lie within stasis. Stasis often reveals something unseen or passed over during motion. Form is a silent monument to movement. When a body is in motion, a particular shape is like a spark flung off from the flint of time. It is incandescent but

ephemeral. Part of the significance of such a shape is that it is impermanent. In sculpture, part of the significance of a shape is that it is permanent. It suggests, it promises, but never leaves the surface of space to fly off into time. The sculptor is creating a dance just beyond our ability to infer it with the senses.

A dance cannot be concerned with sculptural form at every instant, for that would make static form more important than movement. In dance, form is made rich because it arises out of motion, so that the "reason" for a form lies outside of space and in time. Dance is a temporal art, which at its extreme case, shows that no motion is happening within its finite time of performance, but at no time during the performance do we cease to expect that motion will resume at any moment. It taxes a dancer's control not to move a single muscle, to suppress even breathing. It is like the actor 'playing dead'. A dancer not in motion is not necessarily surprising but if a human figure does not move after a long period of time, then s/he is either asleep or is truly dead.

Arresting motion is different than motion not occurring at all. When we witness a change from motion to stillness, the quality of the motion lingers briefly over the boundary in time as a sort of inertia. It is no different than the illusion that the train tracks are still in motion after getting off a train if we while we were on the train we were watching the tracks from the front or rear of the train. An object can move slower and slower until it stops and then reverse direction and gradually move faster and faster. Stasis in this case is simply a turning point, a point of rounding in the graph of the motion, like the moment when an object thrown in the air stops rising and begins to descend. When motion already exists, stillness is simply one rate among many possible rates.

> THE MOBILE

With a mobile, if we know the length of the parts that can move, the points of articulation, and the limits on motion at these points, we can predict every possible shape the mobile can attain and predict the volume of space that it may at one time or another occupy. Knowing the same information about a dancer does not allow us to make the same predictions. It is a temporal art, we must wait to find out the answers to these questions. If we pick out a place on the stage in advance, there is no way to say whether or not the dancer will come to occupy it. In the case of the mobile, if the point lies within the volume of space it can theoretically occupy, if we are patient enough that point will become occupied by the mobile. For the mobile, time is merely the medium in which it works out the permutations of its spatial possibilities¹⁶. At best a mobile can be analogous to a dancer, but one allows h'erself only to be moved by another dancer

> OTHER COMPARISONS

The sculptor, in creating the work, applies motion to matter, but that motion must come from a point outside the material being shaped. The dancer shapes matter (h'er own body) through motion too, but the motion arises from within the material being shaped. Only the choreographer, as the creator, can act from outside the body.

If we allow our hands to follow the curves of the sculpture, we will experience a more direct form of motion and change through time. A dancer's body is moldable. The dancer treats h'er own body as would a sculptor while making a sculpture, making and remaking its form, only there is no final

form to be achieved as an end result in time, a form that makes the forms that may have led up to it irrelevant. What is irrelevant in the sculptural process is what is essential to dance.

Once complete, changes in the form and appearance of a sculpture are due only to changes in our perspective. If we try to effect such a change with a dancer, by the time we are in a new position, the dancer will probably also have moved to a new position and assumed a new form. The sculpture is more patient with us.

The dancers' motions both create space and reveal its properties. As we move around the sculpture, *our* motions are in response to the way the sculpture organizes the space around it. Our "dance-like" motions are aimed at finding out spatial properties that are already there.

We usually move around the sculpture while the dancer usually moves around us (though the convention of a stage often distorts this fact). In the case of sculpture the spectator is the repository of time and motion through space in an attempt to get to fully know the work. In the case of dance, the work is the chief repository of time, which time is used by the dance to reveal itself to us.

If in dance and theatre we spoke about the possibility of our entering into the space of the work and affecting what happens to the work in time, then in sculpture we may speak of the work entering into our space and affecting our space.

We see a person standing still. We know the person is alive. We wonder how long until that person moves. It is *merely* a matter of *time*. We see a statue of a person, it is merely a matter of time until we become convinced it will not move, that is not alive.

> USE AND FORM

If a vase is filled or emptied of water, while this is an activity in time, it is not strictly speaking artistic time in which this occurs, but time of the everyday reality. Here the space of the work remains an artistic space while the time of the work enters the everyday reality. The form of the vase is meant to be consonant with the properties of the material that fill it and then be poured out of it. In using the vase we are giving shape to amorphous liquid. Here there is something akin with how architecture creates an inner space that we ourselves in turn fill with our senses.

Notes

¹ The possibility of extension remains constant with space regardless of time. This is not so with the possibility of being occupied. Once a region of space is occupied, it has been robbed of the possibility of *becoming* occupied, unless there is intervention in the form of an event that occurs later in time that dislodges what is presently occupying space.

² In between, in e.g. the schiacciato works of Donatello, the sculpture is both an object in space and a space that holds objects. There is the everyday space into which the relief climbs, and the background space which recedes to a vanishing point not within the everyday space.

³ If we could move more freely in three dimensions, without the constraint of gravity which nullifies much of our movement fully into three dimensions, we would not only watch the dance of back and front but also of top and bottom. Even if technological developments would allow us to assume *any* position relative to the sculpture, and not just those

that keep us upright on the floor, we will still never be able to *pass* through the front in order for it to become the back, we will always have to go around. We must pass by the sides.

⁴ Convexity suggests the sculpture is pushing out on the space around it, while concavity suggests that it is sucking in the space around it.

⁵ In a circular room lined with mirrors I can see myself from all sides without changing position and only changing the direction I am looking with my eyes. If there is a sculpture in the middle of the room by looking sixty degrees left and right I would see the front and the back of the sculpture. I would still not see from below or above or below, for that the floor and ceiling would also have to be covered in mirrors.

⁶ To the degree a sculpture does represent something besides its own material, we may say that the term narration, so important in literature, and applying still in painting in representational paintings, persists into sculpture.

⁷ I have always felt this way about the girl behind the bar in Manet's "Bar at the Folies Bergeres". The reflection of her back in the mirror does not look at all like what I would imagine her back would look like seeing her front. I take it on faith that the mirror wouldn't lie and suppress my sense. If I am looking at what seems to be a cube from the front, if I go around the side, I may find out that its depth does not equal its length or width. The front provides aesthetic information about what the unseen sides might be like, or should be like.

⁸ No matter where we are with regard to the sphere it is always rounding back out of sight at the same rate. The most we can ever see of the sphere is a hemisphere, and at closer distances progressively less while from very close it begins to appear flat and two dimensional. Only if we had, as certain animals do, eyes at the end of separate stalks, could we perhaps look at a sphere from antipodal points of view and see its entire surface at once. And what would it look like!?

⁹ A mountain is an example of something that is often viewable from some sides but not others. I read somewhere that Nepalese and Tibetans considered Mount Everest as two separate mountains depending from which side it was viewed. Even with smaller mountains we may try in vain to form a concept of what it looks like as a whole. And if we are climbing the mountain we may no longer see the mountain at all or sense where we are on it.

¹⁰ At the moment just before I complete the circle, from the content of what I see now, I may or may not be aware that this is the part of the object that comes just before the part I saw first. It is similar to approaching the octave in music. At the moment just before the diapason completes, at the major seventh, we do not sense the return to the consonance of the unison, but something quite dissonant.

¹¹ One more away of revealing the inside would be to turn the work inside out. At the end of the process, material hitherto hidden on the inside surface of the sphere will be seen on the outside, while material that was seen as surface will have become inside. A traditional problem in topology is to turn a sphere inside out. With the advent of computer graphics, images can be created illustrating various stages of this process, states that are very unusual in appearance. Perhaps in the future a self-automated sculptural sphere could turn itself inside out through time.

Before a sphere is turned inside out it looks like a sphere, after it is turned inside out it looks like a sphere. When we see a sphere therefore we do not know whether we are looking at it inside out or outside in. For it to change from one to the other, though, it must undergo a process through time. This raises the interesting idea of discovering then witnessing other processes that intervene between spatially identical states. The fiber artist Zelma Hadley, from Vermont, has captured states akin to those occurring during the inversion of the sphere. We ourselves can become the active agent that causes an object to turn inside out when we enter a building and use a door as a fulcrum to invert outside and inside.

¹² From the point the furthest away from a transparent sculpture begins to curve outwards and towards me as if commencing a process that would eventually try to surround me. It fails to do this because it curves back inwards on itself to complete itself before reaching me. All in all, I see one

continuous shape, which includes smooth transitions from seeing its outside surface to its inside surface. A pair of elements on the front hemisphere of a transparent sculpture will retain their left-right relationship with each other unless they are seen on the back hemisphere. An element in the front can change its left-right alignment with a given element on the rear by our changing position. An interesting example of a transparent sculpture would be a transparent globe of the earth on which just the outlines of the countries were drawn. We would see the outline of one country in the farther hemisphere projected onto the outline of another country on the nearer hemisphere. It would be the sculptural equivalent of a double exposure photograph.

¹³ In a temporal work of art, two things can occupy the same space at two different times, a spatial art merely does away with the time that intervened.

¹⁴ For instance the Brooklyn Bridge, though it derives some of its beauty from the sites it links, Manhattan and Brooklyn, is primarily beautiful because of the way it effects this connection.

¹⁵ From this same point of view, it would take an infinite number of sculptures to re-approach a single dance, thus dance could not be considered a subset of sculpture.

¹⁶ Regrettably not that dissimilar to how musical minimalism uses time.