

NATIONAL COLLEGE OF ART AND DESIGN

DAVID SMITH: THE AGICOLA,

VOLTRI AND CUBI SERIES

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Jimmy Concagh

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DAVID SMITH AT VOLTRI 1962



## INTRODUCTION

David Smith's development in his large-scale steel sculptures from the 1950's up until his death in 1965 mark a trend towards finding a simplicity in his forms. What I find interesting about this development towards a more direct form with greater unity is the experimenting Smith carried out while working with steel and the flexible manner in which he used it. I also want to emphasise in this thesis the 'found-object' theme which helped Smith find a greater simplicity in his work. In the case of the Agricolas, which was Smith's first major series in steel, the 'found-objects' consist of abandoned parts from farming machinery although they were distorted somewhat to suit a particular form. The Agricola series consists of seventeen sculptures beginning with Agricola I (1951-52) and ending with Agricola XXII<sup>1</sup> in 1959. All the pieces in this particular series were fabricated at Bolton landing.<sup>2</sup>

The Voltri series consists of twenty-six sculptures made over a short period of thirty days in the month of June 1962. They were constructed at Voltri in Italy<sup>3</sup> and are an example of the enormous energy that Smith had during the most productive period of his career. Here he uses the abandoned factory machinery in a more direct manner since many of these objects are left in their original condition and are incorporated into



the overall form. Smith also used his material more directly since none of these pieces are painted. Unlike the Agricolas Smith avoids using paint in order to emphasise qualities within steel by making marks on the rusty surface with the carborundum wheel. Smith's familiarity with steel at this stage seems to have given him the confidence to avoid using an alien material painted on the surface.

This does not mean that Smith's use of paint was arbitrary, because through using it Smith was attempting to create a lightness in the steel since most of the colours he used were bright and colourful. This same effect, Smith discovered, could be found by burnishing the whole surface with the carborundum wheel and this is precisely what he did in his last great series the Cubis.

Cubi III constructed in 1961 was the first of a series of twenty-eight sculptures spanning four years until Smith's death on May 23rd 1965. They are still very much about the 'found-object' theme despite the fact that they look very different from the Agricolas and Voltris.

Smith had discovered that 'all' objects are 'found' even the most basic shapes such as 'spheres' and 'squares'. Smith's interest in the 'circle' and 'square' was a feature of his earlier work but in the cubis he was able to present these shapes in a more solid and sculptural way. Through this simplicity Smith was able to pay more attention to 'movement' and the sense of 'tension' created by the 'tumbling' effect characteristic of some of the cubis.



I feel that Smith would never have reached such simplicity and directness in his work if he had not experimented with steel in the way that he did. I hope to demonstrate through analysing the Agricolas, Voltris and cubis the progression and change that occurred in Smith's use of steel and indeed the 'found-object' theme. I feel that each series is fundamental to the other even though Smith's use of his material and 'found-object' is different in each. From looking at Smith's sculpture over a number of years I feel an enormous visual strength in it and I hope through doing this thesis to understand the strength and character of Smith's steel sculptures and some of the qualities he was trying to put over in them.



FOOTNOTES: Introduction

1. This series did not run in a sequence, e.g., Smith titled one of the pieces Agricola 54.
2. Bolton landing became Smith's permanent studio in 1940.
3. Voltri: a small industrial town twenty miles north of Genoa.



## CHAPTER I

When David Smith began work on 'Agricola' I in 1951-52 it was the beginning of many large steel sculptures. A lot of these ran as a series of pieces which covered a period of many years. The 'Agricola' series for instance, did not finish until 1959 with Agricola XXII which means that they covered an eight year span. The sequence of numbers in this series does not run in order and although there were seventeen pieces made there is an 'Agricola' 54 after 'Agricola' XIII. Some of them are steel, others are a combination of steel, stainless steel and cast iron. They all have one thing in common: they are all made up from parts of disused farm machinery as Smith explains:

The agricola series are like new unities whose parts are related to past tools of agriculture. Forms in function are often not appreciated in their context except for their mechanical performance. [1]

Smith related to the machinery on a 'strictly visual',<sup>2</sup> level and incorporated the pieces to suit his own objectives. This accounts for why he has distorted much of the farming machinery within his sculptures assembling them towards recognizable figurative associations or creating formal interests within them. Despite this distortion it is important not to disregard Smith's interest in this machinery as the choice for making his first major series, especially since the 'found-object' theme was to play a large role in Smith's development as a sculptor.<sup>3</sup>



Smith's interest in machines and the ability to see the potential steel had probably come from his experiences of working three years in Schenectady Munitions Plant where he worked an eight hour day during the Second World War. Here Smith welded M7 tanks and locomotives and was extremely proud of his position as a 'first class armor plate welder'.<sup>4</sup> He was already experiencing the strength that steel had in the fabrication of these armoured vehicles and even at this early stage Smith must have considered the possibilities of working with steel on a large scale sculpture. In fact, it seems to have been the connection steel had with modern machinery that made Smith aware of its relevance to the twentieth century. In this respect his sculpture had a relation to an industrial material that was in popular use during the time when Smith began to make his larger steel constructions. Smith was therefore taking advantage of a medium that people related to in a particular way making them aware of seeing it as an aesthetic material. He was making this point in the 'Agricolas' by directly producing his work from parts of disused machinery even if he had distorted it towards his own particular images.

Smith saw himself creating a totally new aesthetics in relation to his steel sculptures and in his writings: 'Design for progress - cockfight'.<sup>5</sup> He emphasised that his stainless steel arc-welded sculpture was the first to be purchased by an American Museum of Art. Machines he claimed would always



be melted down to be used again in some other form but his steel sculptures would always remain intact for people to see. In fact Smith bases his aesthetics within steel as a type of 'anti-art' in the sense that steel has no traditional values and compared to materials such as bronze and marble which tends to attract the viewer to feel and experience its tactile quality, steel, because of its hard and cold characteristics, repels the viewer. In fact, Smith's attraction to steel and mechanical found objects in the early 1950's appears to have been based on the very fact that it is an 'unattractive' material. For instance he related it to such names as 'vulgar', 'savage', 'death-dealing', 'menacing' and 'brutal'.<sup>6</sup> He went so far as to say that it was a 'murderer' and 'rapist'.<sup>7</sup>

All of these particular associations add to the violence that Smith saw in steel possibly because of his experiences in the Schenectady Munitions plant where he built war machinery for the purpose of its destructiveness. The armoured plating that Smith welded to the M7 tanks was to protect them so that they might attack and destroy the enemy for a while longer. In this respect there is a paradox in that Smith used a material to create an entirely new form of aesthetics which he considered destructive by nature as opposed to creative. Smith, however, acknowledged that the course of nature was as much a part of destruction as creation and in his notes on 'David Smith makes a sculpture' he makes this point:

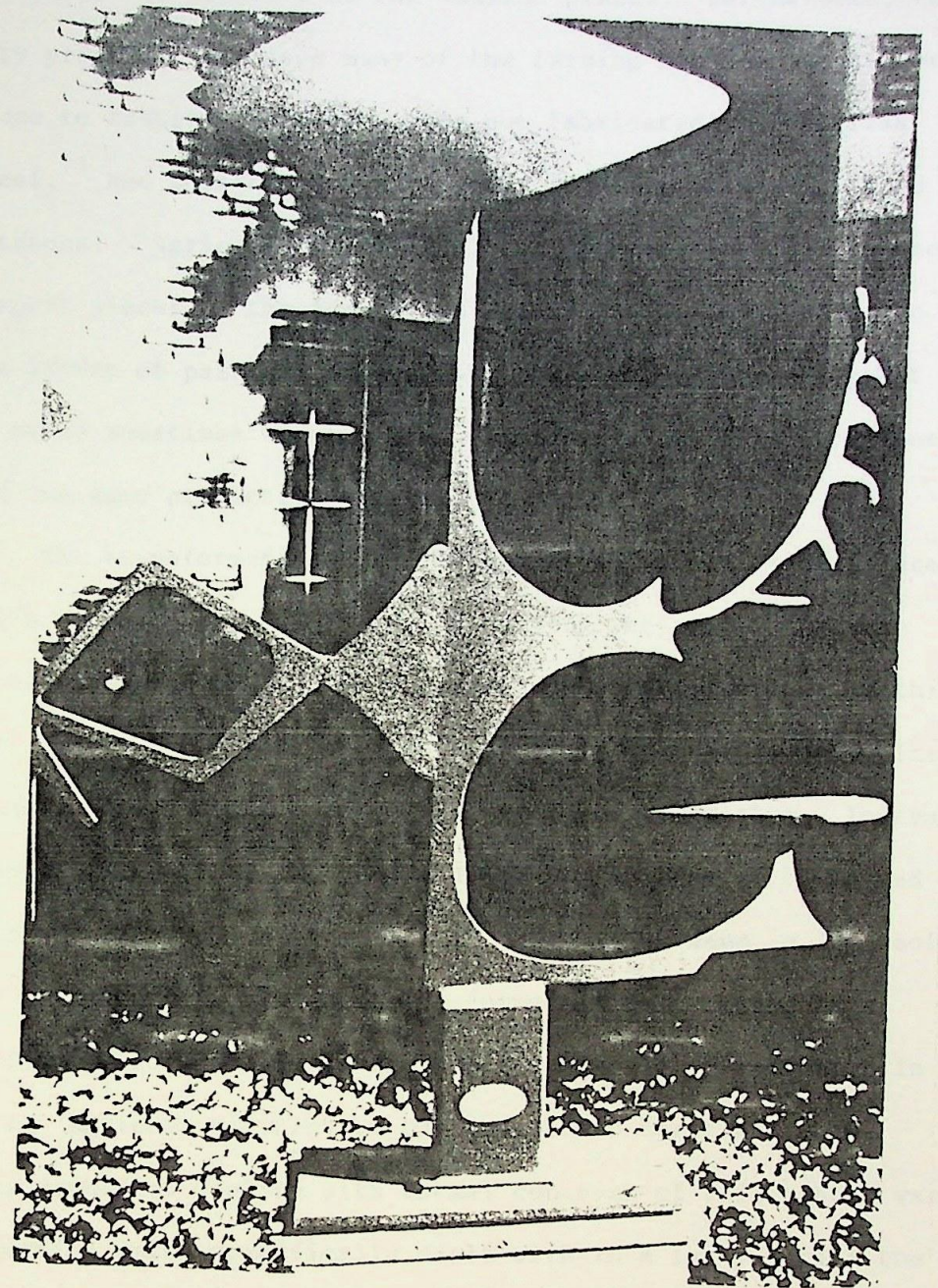
The beauties of nature do not conceal  
destruction and degeneration: Form will  
flower with spikes of steel, the savage  
idols of basic patterns. [8]



In fact Smith saw the 'vulgarity' in steel as the way to project his forms and related strongly to its 'social vulgarity',<sup>9</sup> His interest in steel, however, does not rely entirely in the properties of the metal itself since many of the 'Agricolas' have been painted over. Agricolas I, VII and X are painted red and 'Agricola' VIII is painted brown. Smith maintained that steel needed paint to protect it from rusting, especially since most of his sculptures were for outdoors, as well as unifying the overall form. In an interview with Tom Hess<sup>10</sup> on the subject of paint, Smith explained that paint could make steel appear with greater force and even deny its very structure. If, however, Smith was so interested in his material what made him want to deny it? Possibly because he saw steel as an easy method in which to fabricate his pieces and this may have been why he was not so interested at this stage in the properties it contained. In the same interview Smith admitted that it was sometimes essential to become insensitive to the material and treat it as though one were painting a building.

In Agricola\* I the paint does seem to complement the form itself which here suggests some kind of primitive warrior holding a spear. It also adds to the 'playfulness' of the shapes within the piece as well as a lightness to the steel. The same, too, can be said for Agricola VII which is a lot smaller but has the same type of form with shapes working in and around themselves. Many of these forms would not look as light or mobile if they had not been painted. In the case of the larger constructions this emphasis on lightness is even more relevant





AGRICOLA I 1951-52



since in reality they are heavy and the shapes are not necessarily as 'loose' or flexible as the smaller pieces. Furthermore, for very practical purposes many of the farming machinery parts were prone to rusting since they were not fabricated in stainless steel,<sup>11</sup> and therefore, needed paint in order to protect them outdoors. 'Agricola' VIII\*(1952) for instance, was one of the largest pieces in the series and here Smith has painted up to six layers of paint to protect it. As a substitute for paint he would sometimes varnish over the surface and this technique had the same protective effect.

The transformation that the paint had on the steel interested Smith because it was capable of denying the weight that the material suggested. In many respects the use of colour in this way complements Smith's forms, particularly the 'Agricolas' because many of them have no real solid areas to them. Instead they are like lines in space and the shapes seem to be worked into a horizontal or a vertical form. This can be seen in 'Agricola III' and V of 1952 in which the former is constructed on a vertical-figurative level and the latter on a horizontal. In fact, 'Agricola V' works on three separate horizontals and this method of dealing with formal concerns of this nature was something Smith specifically dealt with in a later series the 'Prima Pianos'.<sup>12</sup> Both of these pieces are two-dimensional so that one does not get the impression of any real mass or weight. However, the steel and cast iron used in Agricola III and the actual dimensions (28" x 16", 1/2" x 22", 3/4") would suggest



otherwise. Many of the shapes in this piece appear suspended, particularly the circle dangling next to the torso of the figure.

'Agricola' I (1952) is perhaps the best example where form and paint work in harmony. The form once again is two-dimensional working along a vertical upright figure. On the raised side of the piece the arm consists of a delicate almost spinal shape and the spear on the other side has the same tendencies, although its features are not so intricate. Likewise the neck is long and delicate especially in comparison to the large head it supports. The paint seems to work well here because it unifies all of these parts toward the primitive warrior figure that Smith wanted to show and also adds to the liveliness of the piece especially since the red is such a vibrant colour. 'Agricola' VIII of the same year is painted over brown which gives it an 'earthy' effect. There is activity inside the elliptical torso and around its outer-edge. The paint here is of great importance because once again it unifies the piece which would appear cluttered if not for a consistency of tone. The pyramid shape that raises the piece off the ground looks solid compared to the light, gestural shapes within the figure but the heaviness of the base holds the rest of the sculpture firmly to the ground and this may account for Smith's choice of an 'earthy' colour such as brown.

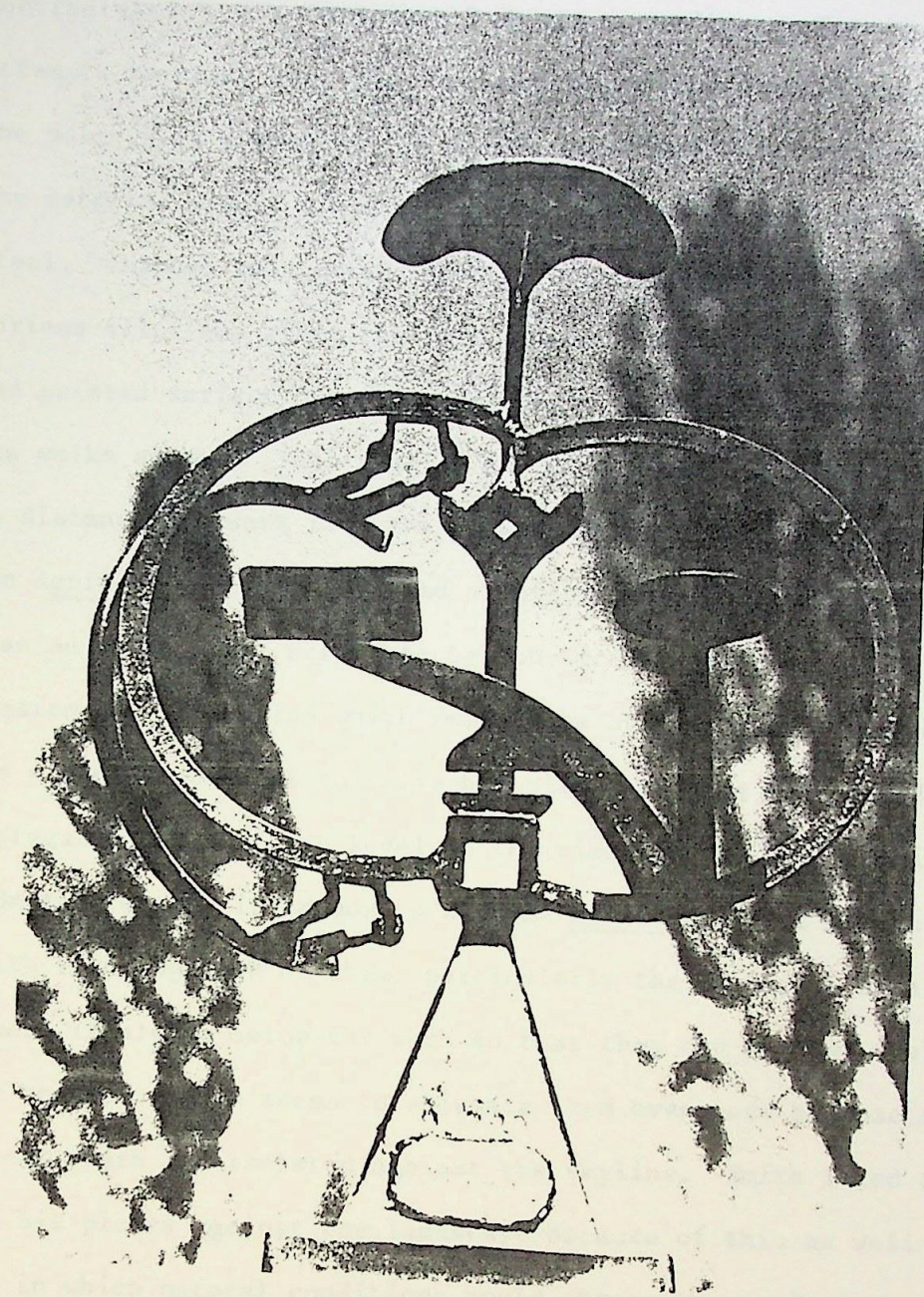
The application of paint, then, in some of the 'Agricolas' relates to the form that Smith was fabricating which through a two dimensional image and lack of any mass within the sculpture



denies the spectator to relate to the material as being heavy and awkward. Smith treats the steel as though it were a line-drawing and denies its natural properties by painting over it in order to complement the form. Already Smith was giving steel new possibilities by working with it towards denying the properties usually associated with it such as hardness, heaviness, coldness and inflexibility. Furthermore, he had distorted the 'found-object' machine parts to suit primitive-like forms which he was interested in. Smith's use of the 'found-object' theme at this stage was arbitrary since his main concern was to re-shape many of the agricultural machine parts to suit his own personal aesthetic forms. In fact Smith was already beginning to fashion his materials into 'velvet forms',<sup>13</sup> and by doing so he was beginning to find a new and personal language in steel. Apart from a 'lightness' and flexibility in Smith's 'Agricola' series the viewer also experiences a movement within the forms since the 'line-drawing' quality created by intersecting and intricate shapes does not allow the viewer to rest on any particular area. Smith also takes advantage of circular shapes to create this sense of movement which he includes in 'Agricolas' III, VI, VIII, X and XXI effectively. The illusion of this movement, however, changes as the viewer walks around the piece and where a continuous flow might be seen from one angle it might suddenly be halted from another because Smith has stopped the line of flow. Rosalind Krauss explains Smith's policy here:

In the 'Agricolas' we see Smith continually stopping line of its power to designate a whole form and making it act instead as the dis-embodied device of pictorial illusionism.<sup>14</sup>





AGRICOLA VIII 1952



In this sense Smith's use of paint to unify the form is contradicted by the form itself which, according to Krauss, attempts to break down the whole sculpture into smaller segments. The paint also alienates the viewer from finding a relation to the material itself since it is alien to the surface quality of steel. Through this Smith seems to be creating tension though various illusions where the form appears held by its structure and painted surface but then falls into segmented pieces as one walks around. This tension may have been used by Smith to distance his work from the viewer so that in the case of the Agricolas they would stand as mysterious objects rather than an object that needed to be 'physically possessed'.<sup>15</sup> The tension and alienation which Smith puts over is reinforced by his use of a pedestal to raise his pieces off the ground and segregate them from the level of the viewer. The use of this pedestal 'motif' is common to all the Agricola pieces and in Smith's photographs of them, particularly the outdoor pieces, the camera is always below the work so that they can be seen against the horizon. This seems to alienate them even more because they appear stark and isolated against the skyline. Smith liked to see his pieces against the landscape because of this as well as the way in which natural conditions could change the mood of the sculptures. In Rosalind Krauss's documentation of David Smith's sculpture,<sup>16</sup> Smith has photographed his Agricolas I, III and VI against the snow. Such conditions must have changed the work particularly in the case of Agricola I



where his vibrant red must have stood out strongly against a white background. In this respect Smith's steel constructions seem to have suited a natural environment especially in relation to the Agricolas most of which were made for outdoors. Smith had protected them with paint and welded them no doubt with the same strength as the armoured tanks at Schenectady plant in order to stand up to the elements.

One of the characteristics within the Agricolas is the complex linear shapes in them which display the flexibility Smith introduced into the abandoned farming machine-parts but which also restricted Smith's work output. It is likely that this is the reason why this particular series stretched over a period of eight years, especially since Smith was concerned in distorting the machine parts into complex and intricate shapes. Apart from the Agricolas Smith worked on other series during the same period such as the Tanktotems and forgings both of which continue with the use of the found object as a distorted image. Smith's output in 1952 gave him cause for personal praise for having completed twenty large sculptures in one year. Smith however, at this stage had undermined himself and his working out-put because ten years later at 'Voltri' in Italy he completed twenty-six large scale sculptures in a matter of thirty days. Smith's confidence and determination had strengthened over the years and his simplification of form in relying on direct use of 'found objects' allowed him a greater freedom with the form.



At Voltri Smith did exactly this since he began to incorporate industrial machine parts into the Voltri series without finding a necessity to distort them towards a more complex and disguised form. This allowed Smith to experiment more with the potential in steel which he seems to have partly neglected in the Agricolas mainly because he was using it to fabricate particular shapes and images that interested him. In familiarising himself with steel during the 1950's and experimenting with it, Smith was already finding a unity between material and form and in the Voltri series this unity creates the most productive period in David Smith's career.



FOOTNOTES: Chapter 1

1. Hilton Kramer, Month in Review (October 1957), Archive III/1345.
2. Ibid.
3. David Smith continuously used 'found-objects' in his work. In another series running parallel to the Agricolas Smith used domestic tank boilers as in the Tanktotem series. In the development of Smith's work the 'found-object' becomes less distorted and more obvious within the form and is a development which appears obvious from the Agricolas, the Voltris and the cubis.
4. Quote from Smith in Rosalind Krauss' 'Terminal Ironworks', p. 60.
5. David Smith, 'Design for Progress - cockfight', 1947.
6. Elaine de Kooning, Art News, September 1951, taken from original notes by Smith on David Smith makes a sculpture.
7. Smith's personification of steel relates a modern material to its environment by describing it with words normally associated with crimes usually committed in cities and built-up areas.
8. David Smith, 'David Smith makes a sculpture'.
9. Ibid.
10. Tom Hess interview taken from Garnett McCoy's 'David Smith', p. 182.
11. Unlike other materials the chrome and nickel contents in stainless steel prevent it from rusting.
12. 'Primo Pianos', a series of three sculptures made in 1962.
13. David Smith, 'Report on Voltri'.
14. Rosalind Krauss, Terminal Iron Works, p. 162.
15. Since the mid-1940's Smith had made references to the 'taboo' totem-object relevant to primitive tribes. The 'taboo' or sacred object was considered to be untouchable and sometimes could not even be looked at. In the case of some tribes animals could not be hunted or members of one tribe could not associate with another. This 'taboo' was normally symbolised by a 'totem' which identified the animal or tribe. Smith was interested in this idea because it gave a physical object a spiritual association which avoided the western ideology of seeing an object and possessing it for its physical value.
16. Rosalind Krauss, 'The sculptures of David Smith', 'Agricola Series'.

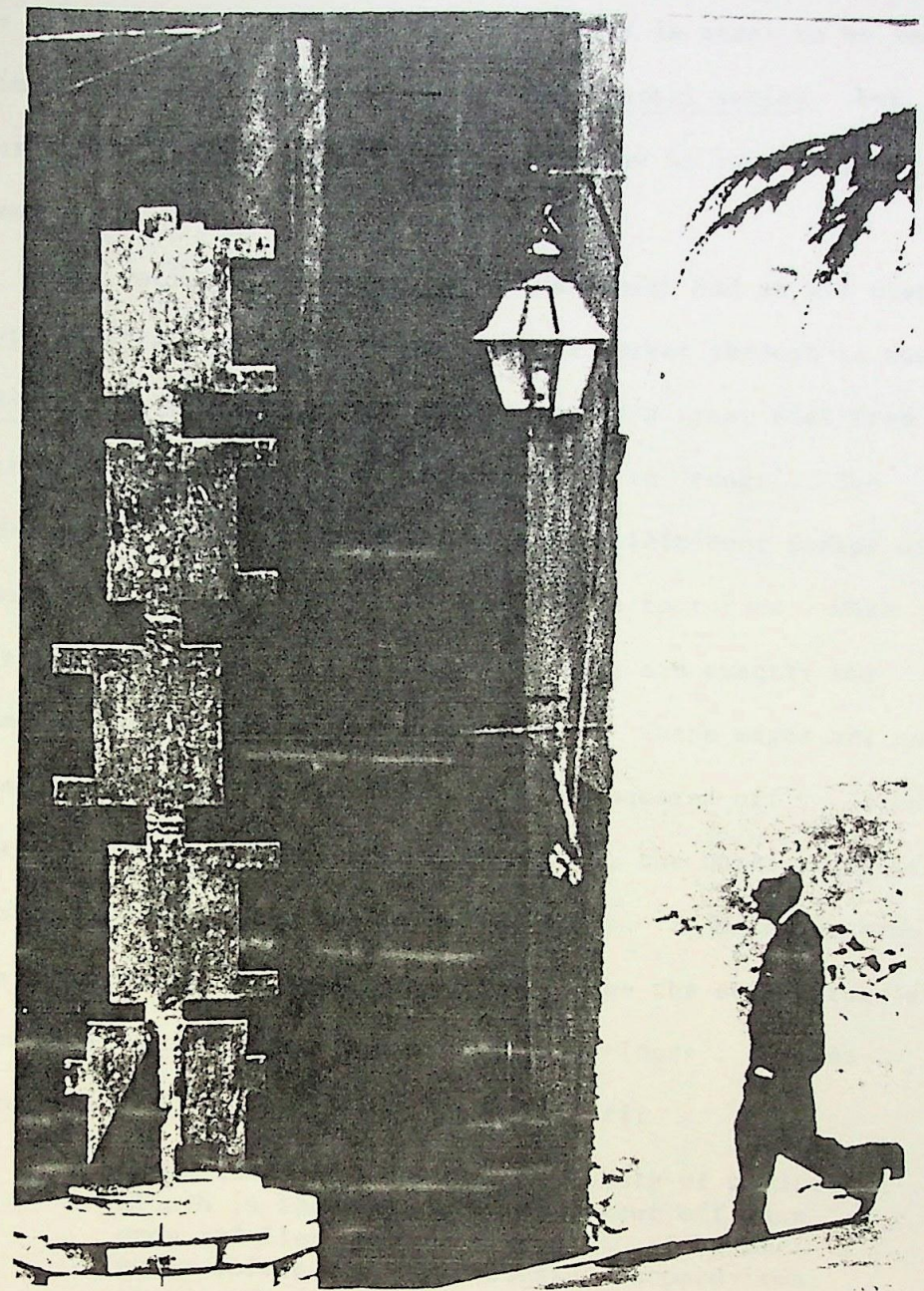


## CHAPTER II

What excited Smith about Voltri<sup>1</sup> were the machine parts abandoned in the factories scattered along the main railway line through the town. They reminded Smith of his Agricola series' although in this case the found objects consisted of industrial as opposed to agricultural machinery. Hence, the theme of the 'found object' is continued ten years after the Agricolas and at Voltri it is even more obvious.

Many of the machine parts Smith encountered at Voltri he had not seen before so that the shapes and sizes of these parts differed a great deal from his experiences of industrial American machinery. He also had a great variety of abandoned machinery to choose from since Italsider national steel company<sup>2</sup> had allowed Smith to use all the factories that were no longer in use at Voltri. I feel that the variety of machine parts Smith had at his disposal and the fact that their designs and shapes were entirely new to him gave him the incentive to work with them more directly. This may explain why Smith made so many pieces at Voltri because the interest lay in how one 'found object' worked against another as opposed to working at great length to distort these shapes towards a more particular form. By working this way Smith found himself experimenting a lot more in the way shapes within these machine parts could play off each other or the way a sheet of steel for instance,





VOLTRI I 1962



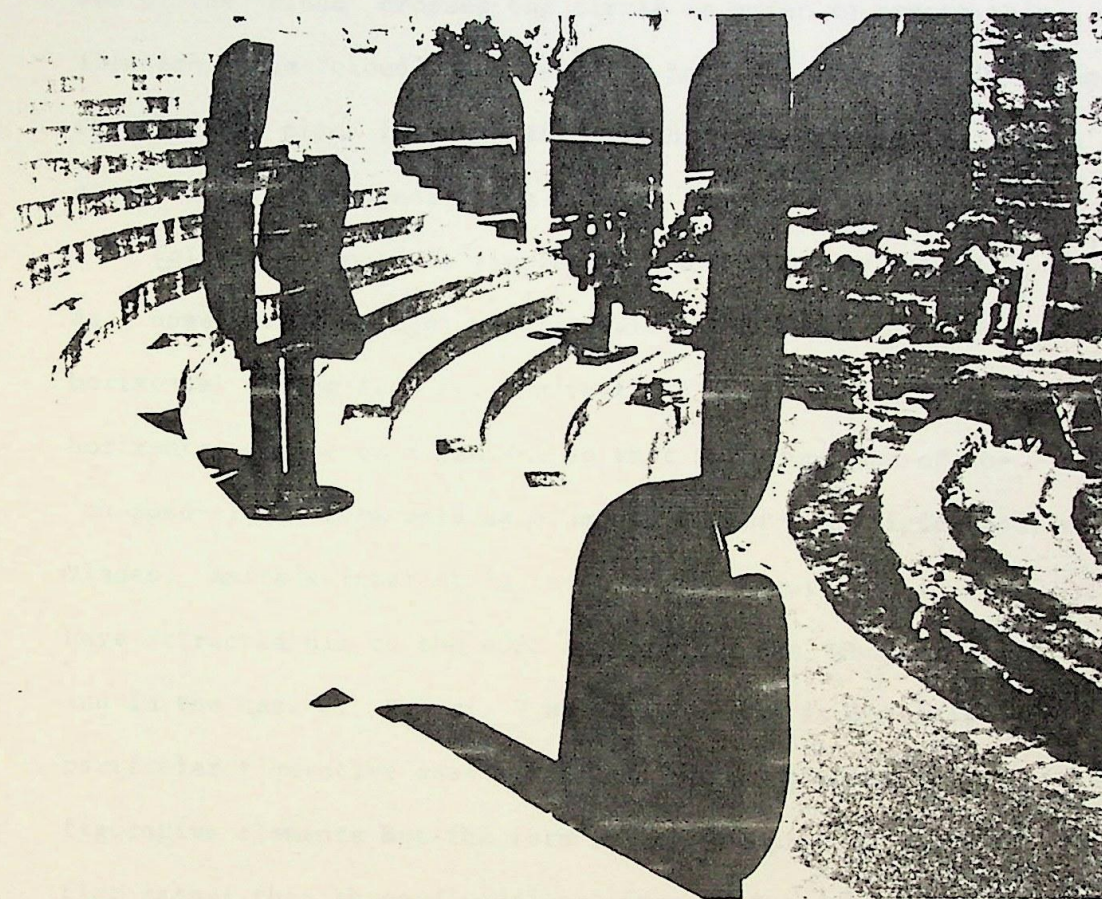
could be bent and rolled to look like a 'stick of gum'.<sup>3</sup> There is also a concern to allow the properties in steel to be seen since Smith does not paint any of the Voltri series but cures them instead with phosphoric acid and by laquering the surface over.

The variety of machine parts that Smith had at his disposal relates directly to the themes that he worked through in the Voltris. Likewise, these themes varied a great deal from 'circles' to 'chariots' or from 'clouds' to 'tongs'. The 'chopped-cloud' motif came to Smith from left-over scraps of sheet metal he had 'found' in some of the factories. When a billet rolls out to a sheet no two ends are exactly the same so that irregular edges are formed. These edges are normally disposed of when the sheet of metal is 'squared-off'. If one can imagine a rolling-pin compressing pastry, the outer edges of the flattened pastry form an irregular shape. In much the same way the outer edges of these metal sheets have the same irregular form which Smith liked to call 'chopped clouds'. He was fascinated by them while working at Voltri:

There is great wonder and a beauty of natural growth in these variations. I cut off many ends and flew them many ways. . . I have never before seen or possessed chopped-iron cloud ends. [4]

Smith also liked the idea that the irregularity of each 'chopped-cloud' end was different and therefore unique. He includes the 'chopped-cloud' motif in 'Voltris' II, IV, V, IX, XIV, XV, and XVII and in each piece places the shape within the





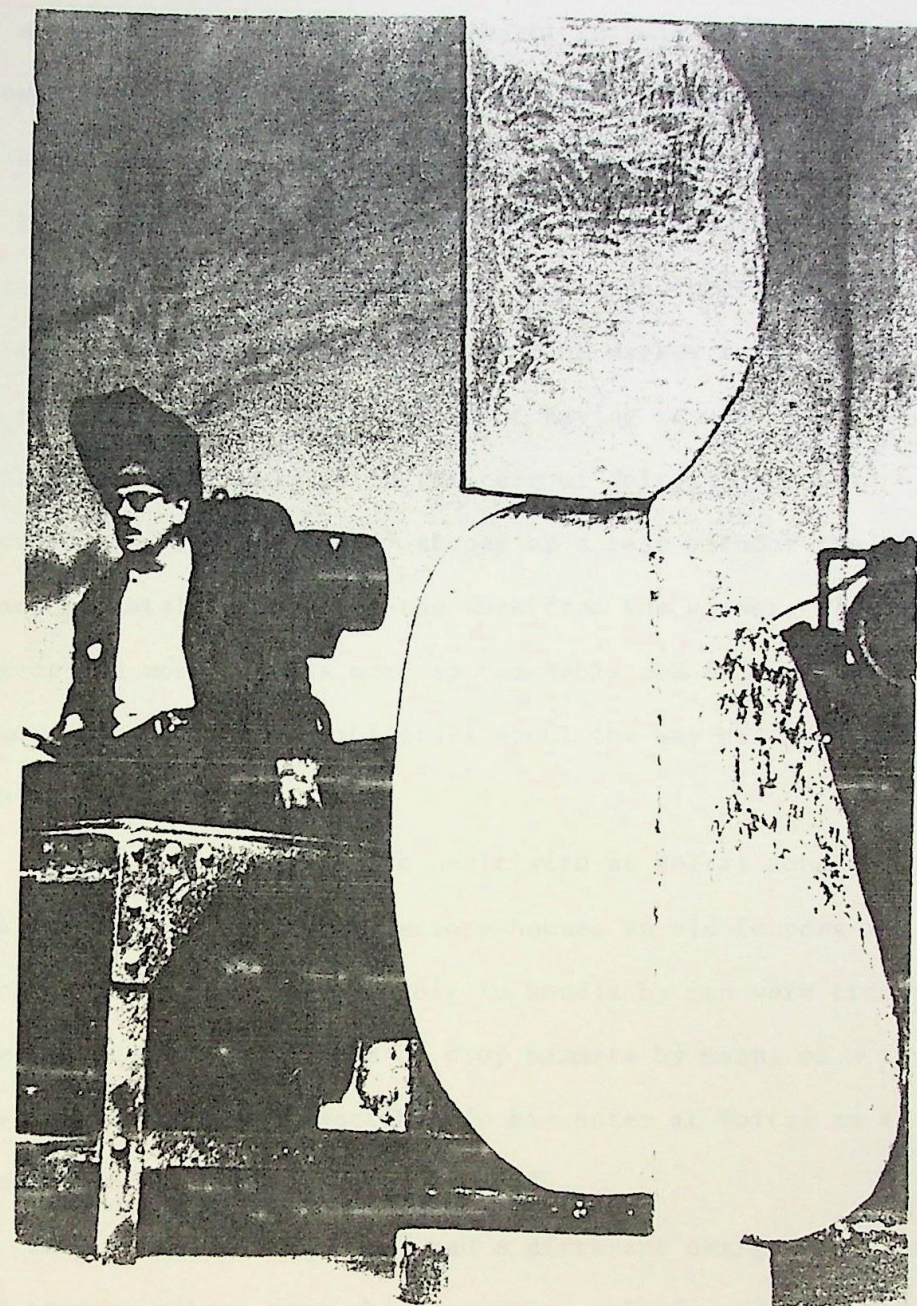
VOLTRI V (foreground) 1962 & VOLTRI XVII 1962



overall form to create a different visual response. In Voltri II\*the 'cloud' runs between the upper part of a circle horizontally. In this position it does in fact seem to be physically 'floating' since it does not appear to have any apparent attachment to the circle especially when looking at the piece from the front or back. Smith has in fact only welded it at one point where one end of the 'cloud' crosses the circle in order to create this illusion. The 'cloud' here seems to have the effect of 'lifting' the circular piece into the air, which suggests that the 'tongs' acting as a base appear to be holding it to the ground.

Voltri V is quite a simple shape and here the 'cloud' form acts as a base for an upright vertical which has a shorter right-angled horizontal coming from it. The vertical suggests a neck and the horizontal a base of a jawbone so that the roundness of the 'chopped-cloud' form acts as a smooth rather than rigid shoulder blades. Smith's interest in the feminine figure<sup>5</sup> would also have attracted him to the soft features of the 'chopped-cloud' and in the case of Voltri V he seems to use it for this particular figurative association. Voltri IX\*also has figurative elements but the form is more simplified towards a flat rather than three-dimensional image. Two 'cloud' forms are used here; the larger one acts as a rounded torso shape, the smaller as a head. In Voltri X Smith takes advantage of the 'chopped-cloud' motif again by using it as a rounded feminine torso.





VOLTRI IX 1962

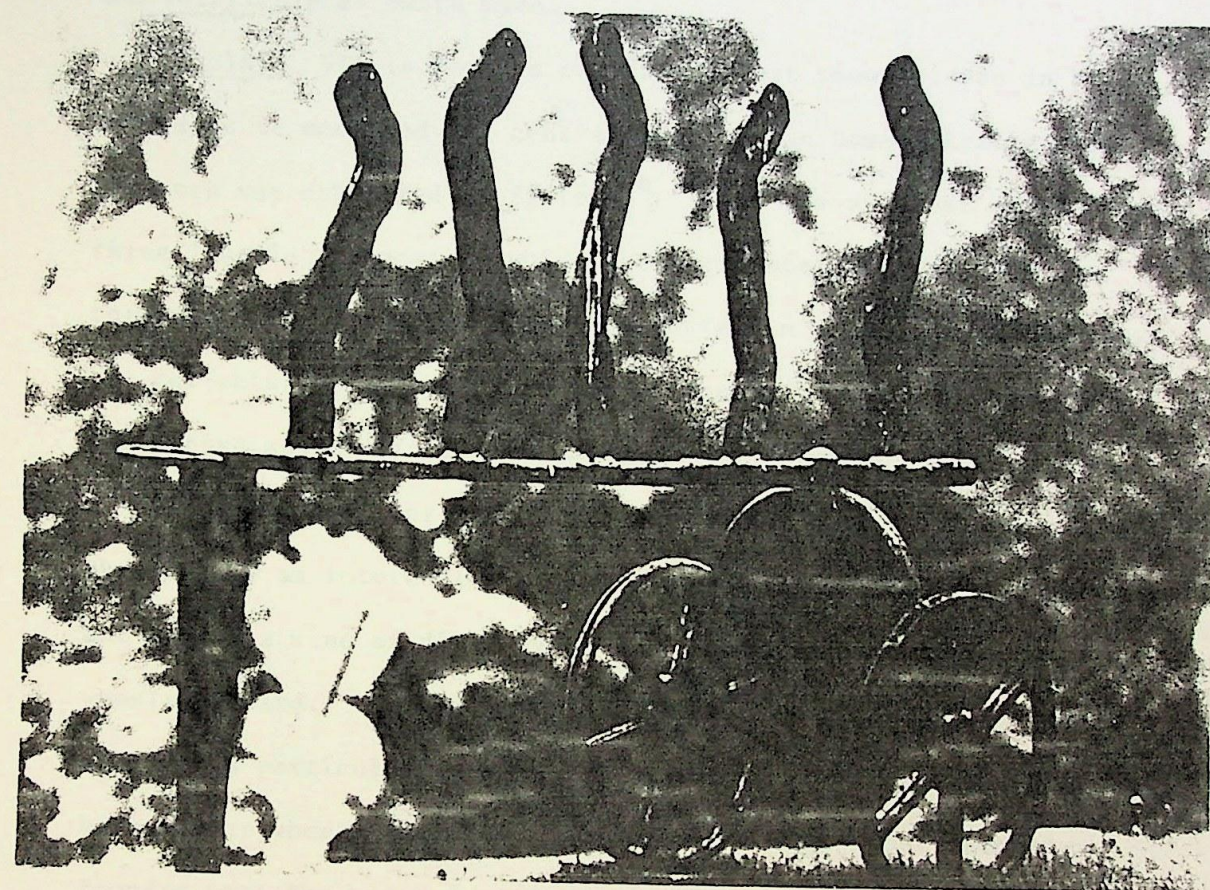


In all these cases, Smith has taken a 'found' element without the necessity of distorting the object to suit a form. He has allowed these iron 'clouds' to shape his sculpture because of the beauty he saw in them and in the case of Voltris V, IX and XI he has made marks on them with the Carborundum wheel so that the metal does not remain the same tone throughout the piece. These marks which score into the darker rust surface make the sculptures more 'lively' without having to use paint. Furthermore, particularly in the case of Voltri V,\* Smith has used the 'chopped cloud' shapes as a base without the use of any pedestal to separate the work from the viewer. In this respect the work becomes more approachable and Smith seems to be more open to the possibilities about the way his sculpture might be seen.

Another theme that Smith dealt with at Voltri concerns the 'chariot'. One particular factory housed an old foundry in which forgings that were too big to handle by men were transported from the ovens to be worked by drop hammers by means of a tong, a vehicle which Smith described in his notes at Voltri as a 'chariot on two wheels pushed by men'.

Each of these 'chariots' had a different design and Smith used them as a base from which to make Voltris VI, VII and XIII. Smith used two end 'clouds' and a large 'spoon' shape on which one of the clouds rests upon. This particular 'cloud' is not supported by the 'chariot' as it stands in a vertical position but entirely by the 'spoon' shape. Because the other cloud





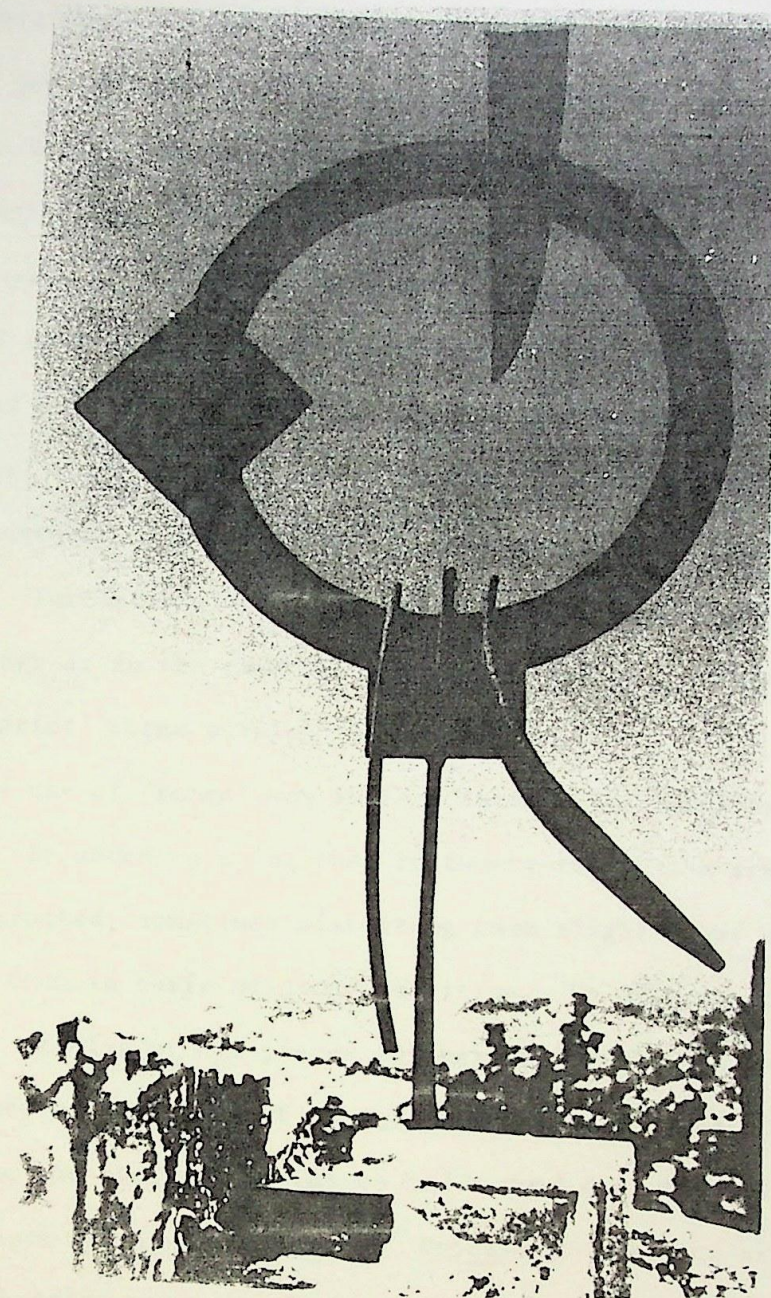
VOLTRI VII 1962



rests parallel to the one supported by the actual 'spoon' it is not attached to the 'chariot' either so that the 'clouds' seem to be almost floating above it. The large wheels here on the 'chariot' as well as the use of the 'cloud' motif suggest earlier associations with Voltri II where the 'clouds' gave the illusion of lifting the circular shape. Voltri VI gives the same illusion of lightness although it is in fact the heaviest of all the Voltri pieces Smith made.

Voltri VII is perhaps one of the best known pieces in the series as it occupied the central area of the Roman theatre when the work was exhibited at Spoleto.<sup>6</sup> It is the simplest of the three 'chariot' pieces in which the horizontal rod has five-bar forgings. The whole piece is constructed in steel and the forgings are cut-outs in zig-zag 's' shapes. These shapes have been given figurative associations<sup>7</sup> but Smith in his notes at Voltri made it clear that they were not 'personages' but simply 'forgings'. They create an interesting rhythmic form along the horizontal bar and act as a kind of directive force as though trying to push the wheels forward. Voltri XIII also has a 'spoon' shape and Smith calls this particular piece "a circus wheel chariot. . .", possibly because the wheels resemble a larger version of those normally found on toys. The piece is a lot more congested than Voltri VII and there are similar 'cloud' shapes on either side of the 'chariot' in Voltri VI. The upturned 'spoon' slices through one of the 'chopped-cloud' shapes as though it were scooping a piece from it. This again gives a lightness to the sculpture denying the 'heaviness'





VOLTRI XI 1962

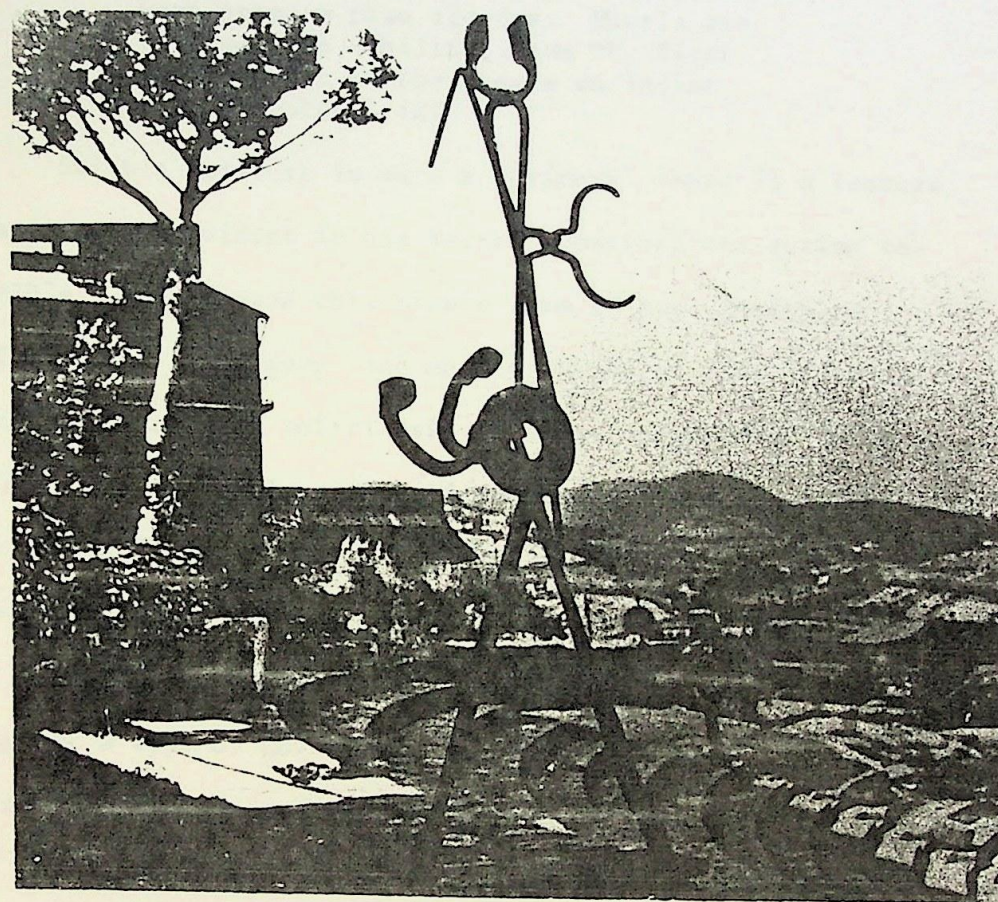


and 'hardness' of the steel.

Here again in these three pieces Smith improvises around a 'found object' which in this case is a 'chariot' vehicle previously used at Voltri for very practical reasons. Smith uses it as the fundamental base from which to work and allows the 'chariot' to become part of the overall sculpture. The pedestal is once again omitted so that in each of the pieces the two front wheels and a tail-end have contact with the ground. In Voltri VI Smith works his steel forms by using the 'chariot' as a horizontal and the 'chopped-clouds' as a vertical so that there is an interest in both fields. Furthermore, there is not a restriction on one 'found-object' but rather as in the case of Voltri VI and XIII of the 'chopped-cloud' and 'chariot' theme working in coherence.

The use of 'tongs' was another theme which Smith employed at Voltri. He ended up using them in twenty-two of the sculptures he constructed, sometimes distorting them slightly but usually leaving them in their original condition. He only expected about twelve of his pieces to include them but he was so fascinated by the range of 'tongs' he came across that even after finishing the 'Voltri' series he had a good deal more of them shipped back to Bolton landing. In Voltri II they act as legs but through bending across each other they act as arms trying to hold on to the circle that appears to be floating with the use of the 'cloud' shape. In Voltri XI they are like two eyes stemming from a simple torso-shape and in Voltri XX\* they take on the form of two arms in movement as well as a head-shape at the highest point of





VOLTRI XX 1962



the piece. The figurative qualities that they suggest are somewhat similar to the Agricolas but because of the range of 'tongs' that Smith was able to use it was possible for him to incorporate them more freely and directly into the Voltri series.

Another theme Smith used was the 'circle' and in his notes at Voltri he explains his fascination with this particular shape:

circles have long been a pre-occupation, more primary than squares. Wheels are circles with mobility, from the first wheel of man to the wheels on Indian stone temples. [8]

Smith's interest in such a 'primary' shape is a feature particularly evident in his larger constructions during the 1950's. He had used this simple form in his Agricolas, Tanktotems, Albanys and made a series of five 'circles',<sup>9</sup> shortly before his Voltri trip. He had experienced in this simple shape a variety of different images and had already used it in the 'chariot' theme since he regarded wheels as 'circles with mobility'. He introduced it in its static form in Voltris II, X, XII, XV, XX and XXII,<sup>10</sup> and in each piece it is used to suggest a type of movement. In Voltri XII\* for instance, such a movement is created by certain shapes around the bottom circumference of the 'circle'. On looking towards the face of the circle from either end this movement is created by two pieces of plate-steel that bend towards the circle in an anti-clockwise direction. As the eye moves around the 'circle' the movement appears to be stopped by a 'dagger-blade' shape of steel penetrating down towards the centre of the 'circle'. The movement continues, however,



as a square form seems to weigh the circular movement back towards the base.

This interest in defining a movement through form seems to run through the Voltri series such as in the 'cloud' motif where the form seems to be lifting the overall structure, or the 'chariot' theme in which the wheels suggest mobility and here too in the use of the 'circle'. Unlike the 'circle' series Smith made at Bolton landing in which he painted the forms to suggest 'lightness' he avoids using colour at Voltri and relies entirely on form. The same rule applies to the other themes and if movement is suggested, it is not done by the use of paint on the surface but rather marks made by the Carborundum wheel. Smith's emphasis on the 'found object' in the form of machine-parts at Voltri, including the 'circles', which he had in fact 'found' and incorporated into his sculpture, seems to have allowed him a greater freedom towards experimenting with the motion he could create by relying on form as opposed to colouring his pieces. It was obvious then at this stage, that he no longer relied on paint to create the illusion of 'lightness' or 'motion' but rather in the forms he fabricated in steel. In this respect he was using the properties available to him in his material as opposed to introducing an alien material such as paint.

In the Voltri series this form was simplified by the purpose of the 'found-object' and it was this simplicity of form that I feel allowed Smith to work swiftly enough to complete so many sculptures in such a short period of time. However, there were



already indications at this stage that Smith had found an even simpler formula through the 'found-object' theme in which to construct his work. 'Cubi IX\*for instance, was included separately from the Voltri series in the lower part of Spoleto and consisted of stainless steel cubes, some oblong shaped, others, long-lengths, and criss-crossing at various points. Smith had made this piece long before his invitation to Voltri<sup>11</sup> and had it shipped over from Bolton landing where it was made for the exhibition. In much the same way as Smith had 'found' machine parts at Voltri such as 'tongs', 'wheels' and 'clouds' Smith considered that geometrical entities were as much 'found' and speaking of the 'cubis' he said that they all had 'a basic geometric form that is already found. . .'.<sup>12</sup>

Smith in fact considered these cubes as 'square clouds',<sup>13</sup> and used them in much the same way as the 'clouds' he had 'found' at Voltri which was to suggest 'lightness'. The Agricolas and Voltris had seen a development through the use of the 'found-object' towards simple geometric shapes and in the final chapter I want to emphasise how Smith used the properties of steel to work in conjunction with the actual form. I also want to discuss Smith's interest in showing the movement of these forms already suggested by the themes he was dealing with in the Voltri series which he developed without the necessity of paint in the cubis'.



FOOTNOTES: Chapter II

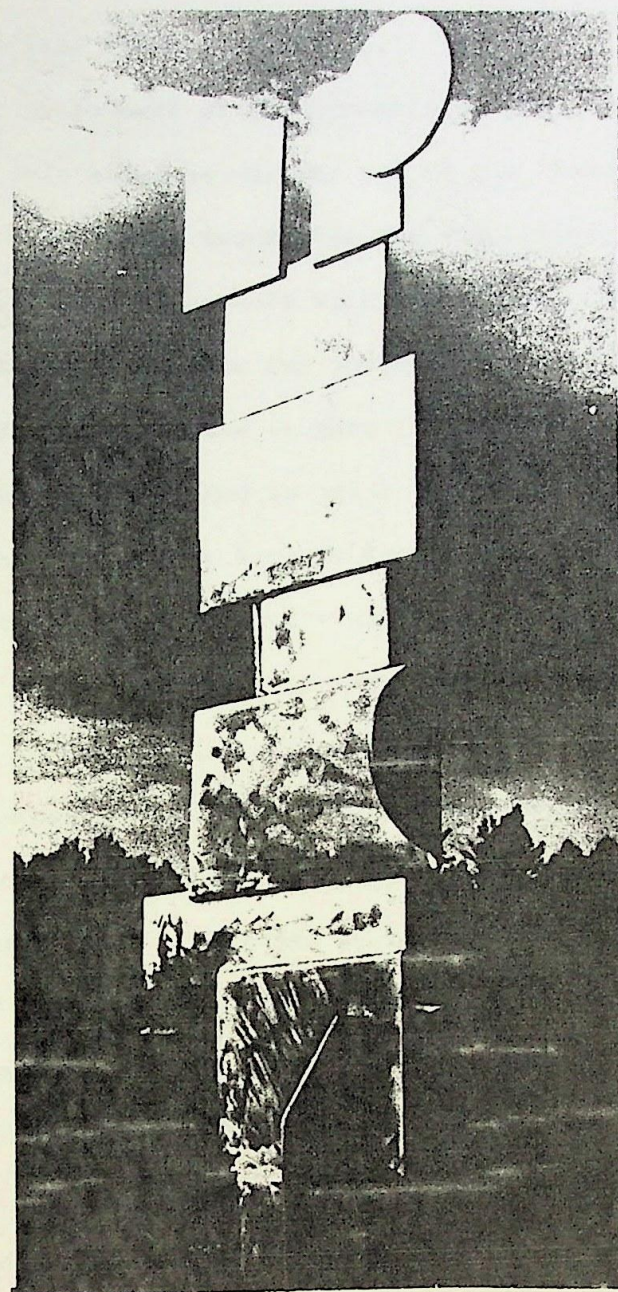
1. Voltri: small industrial town twenty miles north of Genoa, Italy.
2. 'Italsider' national steel company sponsored David Smith's journey to Italy and his participation in the 'sculpture for the city' exhibition held at Spoleto in June 1962. 'Italsider' also provided Smith with ten workers.
3. David Smith, Report on Voltri concerning 'Voltri VIII'.
4. David Smith, Report on Voltri referring to 'Voltris' II, IV, V, IX, XI, XIV, XV, XVII.
5. David Smith, David Smith by David Smith edited by Cleve Gray, "I never made boy sculptures" (p. 94).
6. Professor Giavanni Carendente originated the idea of Smith's participation in the 'sculpture in the city' exhibition. Carendente also suggested that Smith should use the Roman theatre to exhibit his work since he had made so many sculptures.
7. E.A. Carmean (J.R.) American Art at Mid-century (p. 221) and Rosalind E. Krauss Terminal Ironworks (p. 97-98) have related Smith's work at Voltri to figurative influences.
8. David Smith, Report on Voltri 'circle'.
9. A series: Five sculptures constructed at Bolton Landing in 1962 just before Smith went to Italy.
10. David Smith Report on Voltri 'circles with mobility'.
11. Cubi IX constructed at Bolton Landing in 1961.
12. Thomas B. Hess, interview with Smith, New York, October 1964.
13. Next to sketch of his first sculpture in the 'Cubi' series (November 1959) Smith wrote 'polished like I feel if I make square clouds'. All David Smith reports are taken from Garnett McCoy's David Smith, "Reports on Voltri", p. 156.



### CHAPTER III

The cubi series was inspired by the fact that Smith considered geometrical entities as much 'found' as say tongs, wheels or machine parts similar to those used in the Agricolas and Voltris. Referring to the series Smith said that they all had "a basic geometric form that is already 'found'. . . Are triangles, circles and spheres found?"<sup>1</sup> The 'cubis' originate from drawings that Smith made in the mid-1950's where he used milk cartons and beer cans as a means of spraying negative geometric shapes on to paper.\* This method of spray paint allowed Smith to play around with many shapes on a flat surface. In 1955 Smith began to experiment with sterling silver on small sculptures because of its reflective quality and in 1956 he turned to polished stainless steel which may have given Smith the idea of using this method on the geometrical forms he sprayed on paper. In any case by 1959-60 he had begun to use the polished stainless steel on such works as XI Books III Apples and Five-units-equal. The method in the fabrication of these pieces relates strongly to the first cubi ( Cubi III) in that the shapes are similar and the steel is polished and reflective. Cubi III\* is nonetheless more ambitious in its size since it stands 95 inches high and its form is more complicated consisting of five oblong cube shapes welded together in a casual form that appears haphazardly balanced.





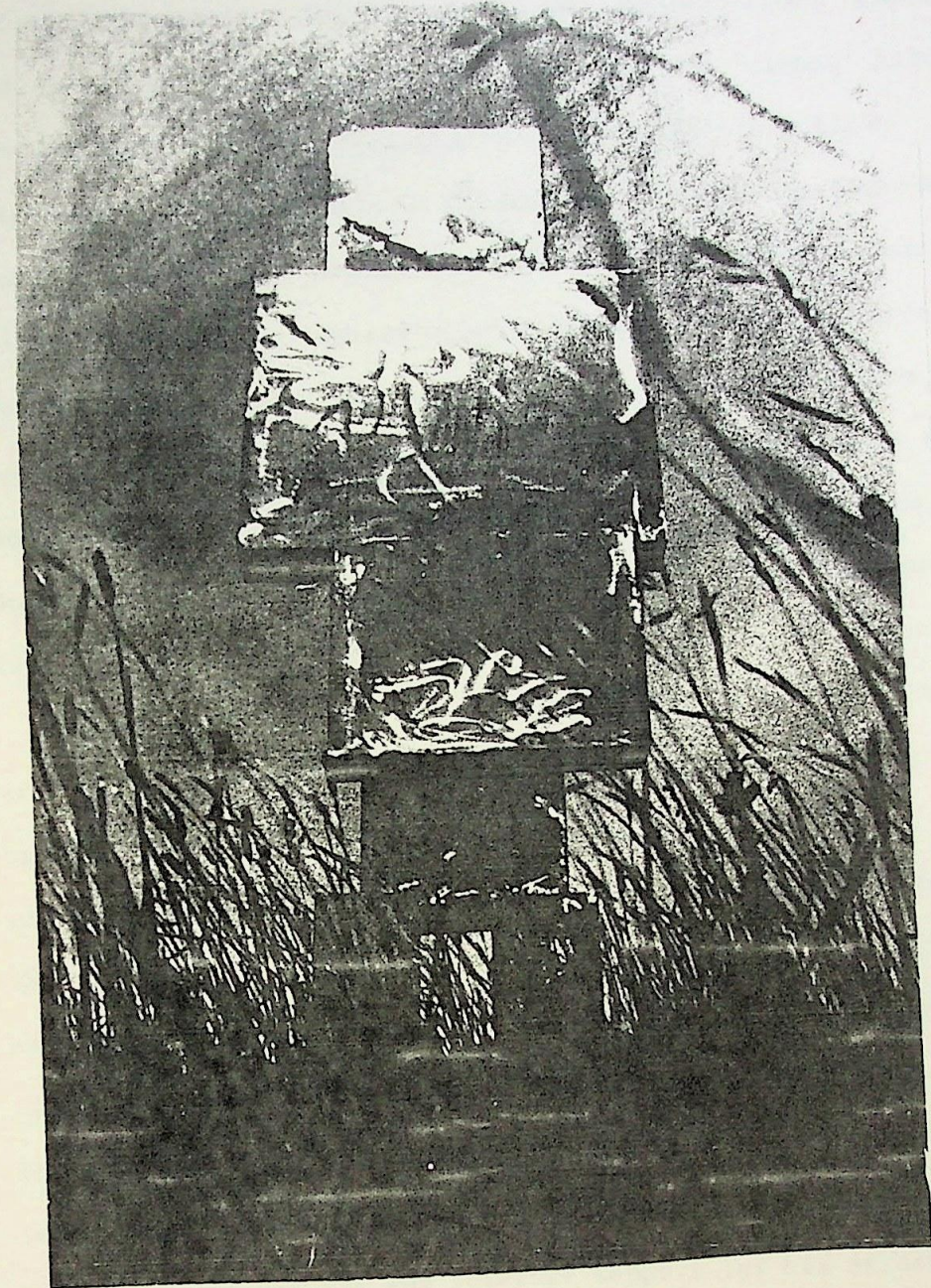
II BOOKS 3 APPLES 1959



Cube-totem constructed shortly after cubi III has smaller box-shapes to it and is less three-dimensional.

Smith's employment of the geometrical shape was already apparent at this stage as was the use of the 'found-object' theme in his earlier work and it seems that the simplification had allowed Smith to develop other aspects within his work. His use of a polished reflective surface for instance was of great importance to these pieces mainly because it gave them more unity as an overall form. Smith no longer had to paint his sculptures in order to protect them from rusting because fabricating this series in stainless-steel - which is not prone to rusting - gave Smith the opportunity of avoiding a protective coating. Furthermore, stainless steel had a reflective quality which made it appear light, particularly - as Smith discovered - if the carborundum wheel were to make marks on the surface. This effect of lightness was something Smith had previously hoped to achieve by the application of paint as in many of his Agricola pieces. However, Smith had now found a way of overcoming this by simply taking advantage of the properties available to him in stainless-steel. He had previously shown an interest in creating a sense of 'lightness' by the marks made by the carborundum wheel on the rusted surface of some of the Voltri pieces. However the effect was not the same since Smith did not polish large quantities on the surface so that any reflective quality was reduced to linear marks which were more a suggestion of movement. In fact many of the Voltri pieces rely not so much





CUBI III 1961



on the quality of the surface to suggest lightness but rather the actual form itself. Smith's use of the 'chopped-cloud' motif was used for this purpose in that many of these 'clouds' gave a sense of the sculpture 'lifting' and hence appearing light. In the cubis Smith had solved the problem of conveying lightness not through form but actual surface treatment. Hence he was able to call his cubis 'square-clouds' because of the lightness they conveyed rather than their actual shape. The same relation can be applied to the Agricolas in which Smith avoided solid shapes and worked with steel in a much more linear way in order to suggest lightness. This method restricted Smith to more two-dimensional forms and made the overall piece more complicated and diverse.

The attraction that the cubis contain is the fact that they are solid three-dimensional shapes that convey the feeling of not being heavy through the treatment of a reflective surface. Here Smith creates a juxtaposition of form and surface. This is even more apparent when one considers that the cubis are some of the heaviest sculptures Smith made, particularly Cubi XX (1964)\* and cubi XXII of the same year. The steel used in both pieces was 3/4 inches thick and both of them are over 110 inches high. The reason for Smith's use of such thick steel was because he did not use any internal support for his structures. Instead he welded one sheet to another along the edge which meant that over a large surface area the steel would not warp or bend. On the smaller cube shapes Smith could reduce the thickness of the steel to 1/2 inch or 1/4 inch. Even at this these smaller components would still be quite heavy yet Smith presents





CUBE TOTEM 1961



them as though they were casually 'tumbling'. In fact the tension and off-balance created here also adds to the illusion of lightness. In this respect not all the credit can be placed on the reflective surface technique since the sense of movement conveyed in this particular series is as much a part of their sense of lightness and even playfulness. This idea of movement was something Smith had dealt with in the Agricolas in that the eye is kept active likewise in the Voltri series he had simplified the idea of movement by using more obvious shapes such as 'wheels' and 'circles' and the 'chopped-cloud' to convey this sense of movement. The simplicity of the forms in the cubi series seems to have allowed Smith to work more freely with this idea of movement and there is a great sense of it in these pieces since many of them appear as if they are tumbling-over. This is particularly characteristic of cubis XVIII,\* XIX and XX, all constructed in 1964. In fact Smith demonstrates here his total domination of steel by the very fact that he denies its heaviness to make it appear as though it were floating in mid-air. Rosalind Krauss associates the 'cubis' as building blocks<sup>2</sup> which through the playfulness they convey seem to be exactly what they are.

In cubi XVI and Cubi XXIII\* (1965) Smith demonstrates the 'openness' of his sculpture since both of these pieces stretch across the landscape over a large area. Cubi XXIII, for instance, consists of three separate pieces: two triangular shapes and a tall cylindrical pole. The pole appears static in relation to the two large triangular pieces which suggest a striding movement



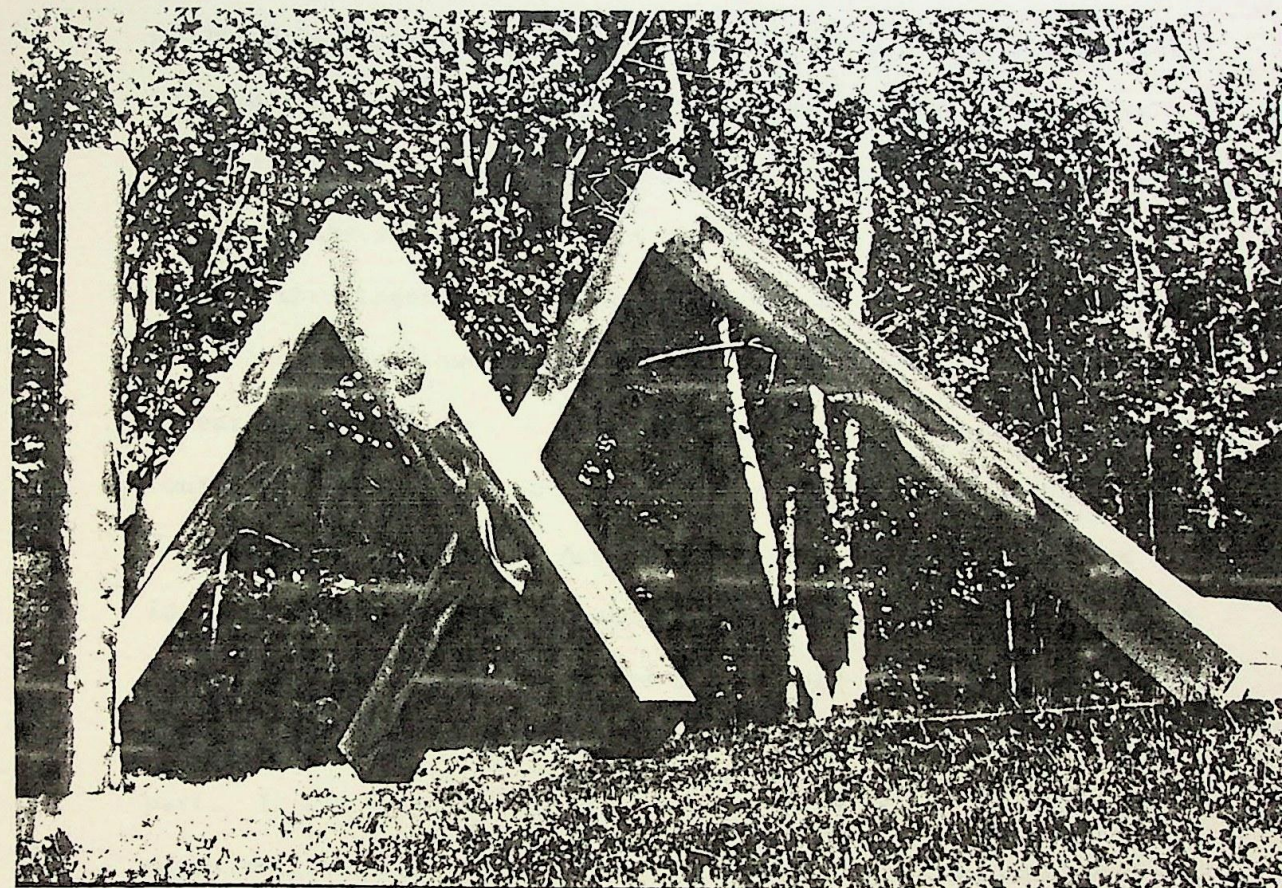
across the ground. Cubi XVI seems to work towards a vertical as opposed to a horizontal movement which in this case is conveyed by two long lengths of square steel which appear to be reaching like arms to the sky. Another interesting element within these pieces is the lack of any pedestal which is common to most of Smith's sculpture. In this respect there is a sense of these sculptures fitting into the landscape since they are not so detached from it by the use of a pedestal, especially in Cubi XXIII which in itself suggests a landscape since the two triangles seem to define the outline of mountains.

The cubis are in fact made specifically for an outdoor environment since Smith liked the idea that the amount of light from the reflective surface of the stainless steel depended on changeable weather conditions. It also reflected the surrounding landscape such as trees and hills at Bolton landing. Hilton Kramer noted this quality within the cubis when he said:

. . .at certain moments it seems as if these sculptures were actually constructions of light itself, not so much occupying as illuminating the space that contains them. [3]

In this sense Smith has allowed natural influences to affect his sculptures in that a good deal of light will make them appear lighter and more prone to describing the surrounding landscape and a small amount of light will make them look heavier and enclosed. In this type of environment one becomes aware that they are continually changing on a daily level. Smith had previously depended on the viewer to create the illusion of change such as in the Agricolas where the form took on a different appearance as one walked around it. In the cubis this can still be the





CUBI XXIII 1962

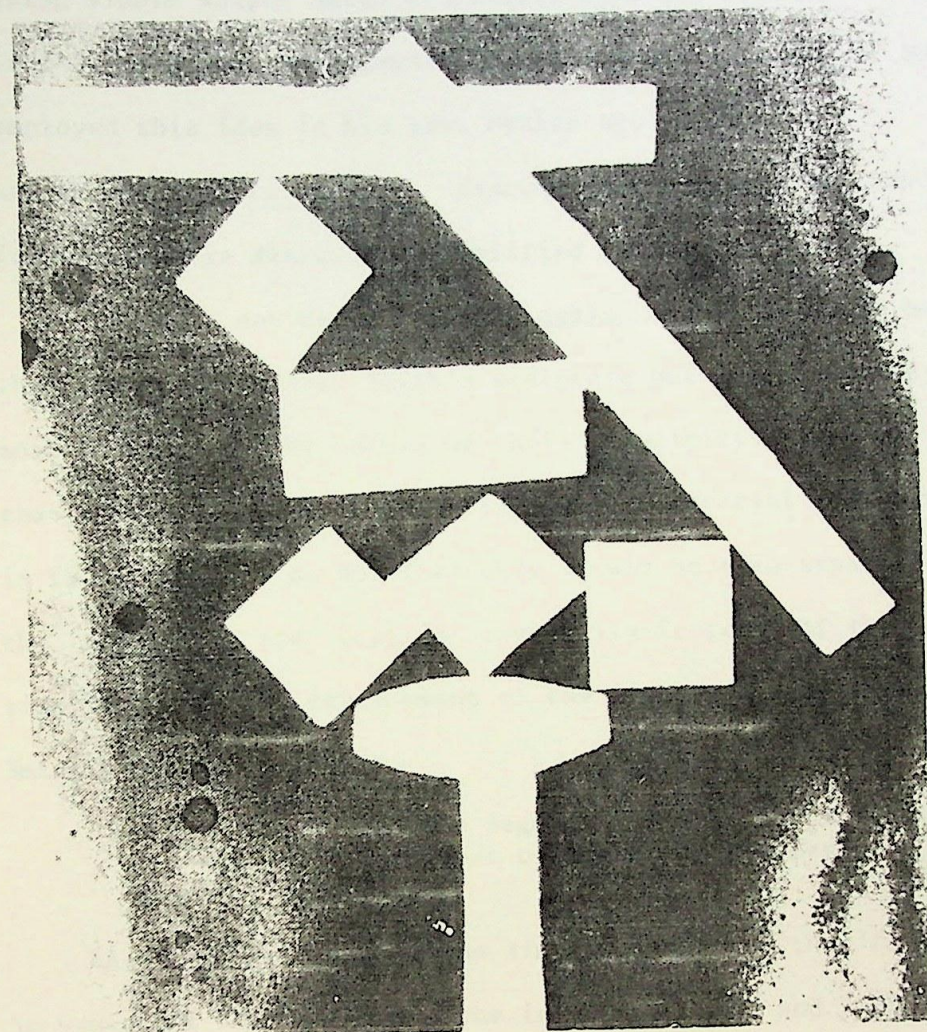


case but the idea is greatly reinforced by the influence of natural forces.

In the cubis Smith had managed to simplify the 'found-object' theme into geometric shapes and worked specifically with one type of steel to clarify form and surface with greater unity. Through this simplification of form he had allowed himself a greater freedom to experiment with movement to reinforce the idea of weightlessness not only by the reflective polished surface but through the appearance of the overall form itself. He had also allowed his work to cover a greater area of ground by working some of his pieces as separate units that did not rely on a pedestal to hold them together but by the relation of one form to another. Furthermore he allowed natural conditions to affect the mood and appearance of his work so that his cubi series would be seen as continually changing from one day to another.

Smith had begun his Agricolas with a variety of complex ideas with regard to the treatment of his material and the overall form. As well as this the scale had changed to large metal constructions which demanded a greater physical out-put on Smith's part. It was important at this stage for Smith to have the right tools available for fabrication and through a gradual familiarity with working in this way as well as a greater dependence on relying on the 'found-object' to suggest form Smith began to find direction and unity in his work. In the Voltri series Smith was more prepared to use his material with an even greater fluidity than before. At Voltri Smith had already begun to use the carborundum





DRAWING C.E. 1964



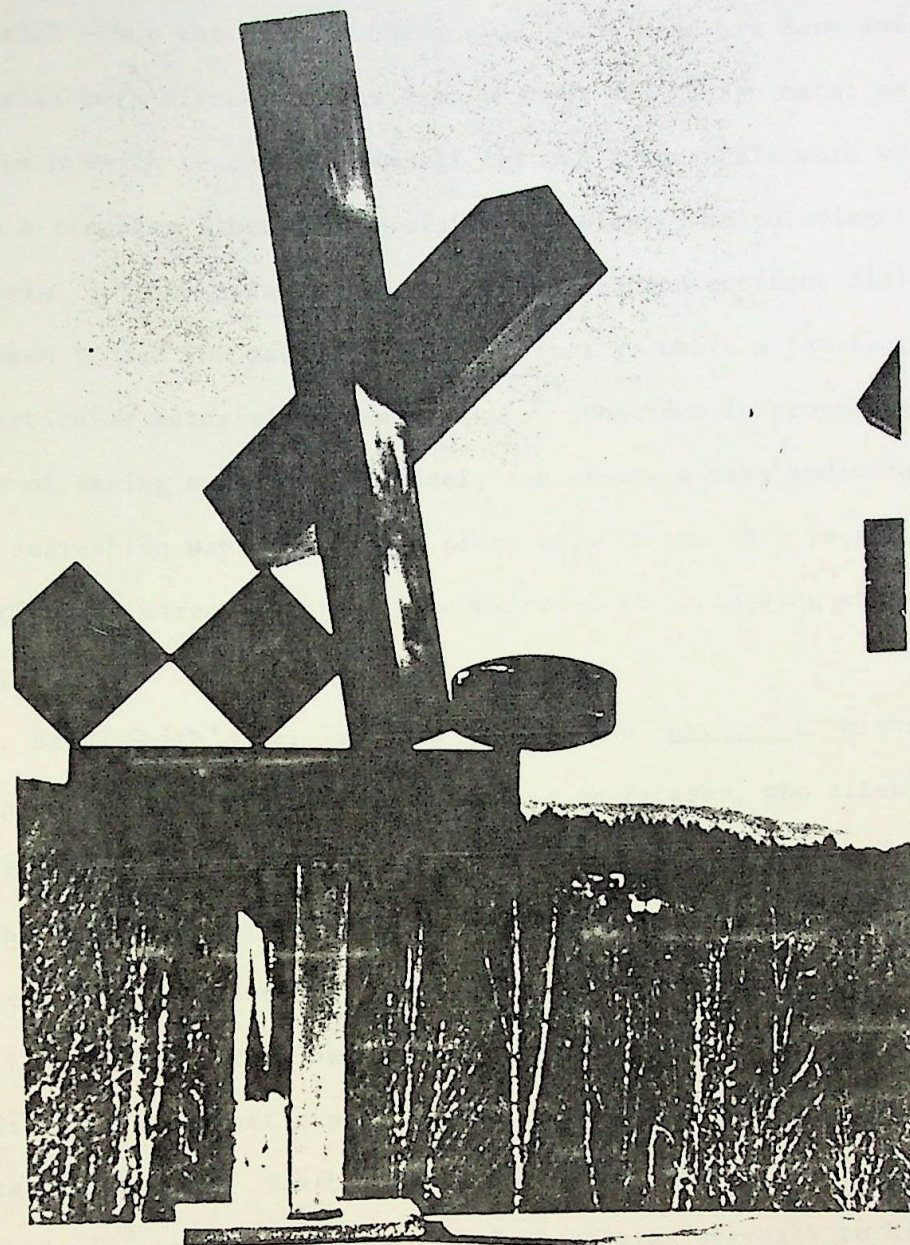
wheel on the surfaces of the pieces to suggest movement and a lightness to the surface of steel as opposed to painting it. He also showed at this stage an interest in movement through 'form' by using such motifs as the 'chopped-cloud' and 'circle'. By using simple shapes Smith discovered that all objects are in fact 'found' including geometric shapes such as squares. Smith employed this idea in his last series the cubis and through the cubis he discovered that he could reduce his ideas into more direct and simplified forms.

This does not mean that the cubis are necessarily better than the rest of David Smith's sculpture but I do feel they are more 'direct' by the nature of their simplicity. They are an end-product of a continuous struggle with material and form and in this respect I do not feel they should be seen separately from the Agricolas and Voltris especially in terms of the simplification and development of the 'found-object' theme. As Smith himself once said:

The works you see are segments of my work life. . .  
The work is a statement of identity it comes from  
a stream. . .[4]

Had Smith not pursued the simplification of the 'found-object' he would not have developed the idea of 'cubes' and 'spheres'. The same too can be said for his use of paint which he initially used to make the steel appear lighter but which he pursued in a similar way by means of a polished reflective surface. From the Agricolas to the cubis Smith was basically chasing after the





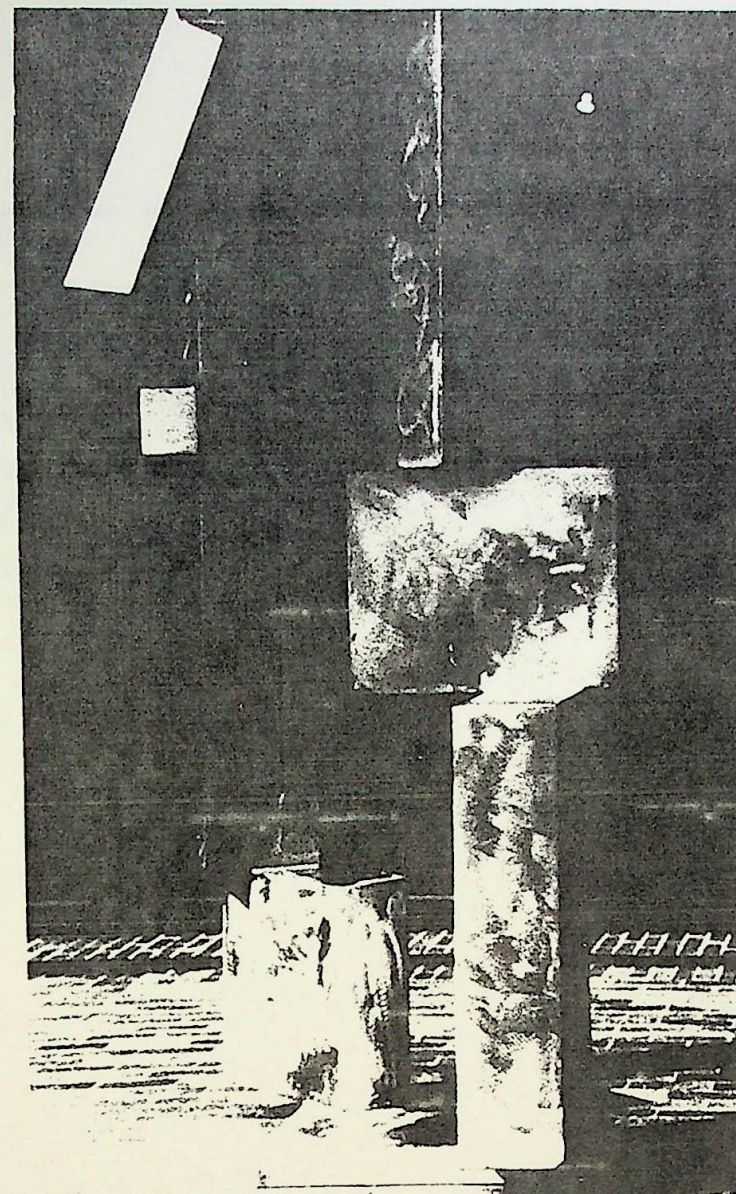
CUBI XVIII 1964



same thing - which was to simplify his form and manipulate his material - but the process changed as Smith used his form and material more directly. The fact that he had chosen metal as a medium in which to express himself through large-scale work was only a stepping stone in the right direction. Manipulating the material into a suitable idea and form demanded constant dialectic between it and the artist and this I feel is where a familiarity with a particular material is essential. Continually provoking new ways of seeing a material, I feel, can create a very individual and refreshing way of seeing a piece of work and this is a particular characteristic I have experienced in looking at Smith's sculptures.

David Smith's earlier work such as the Agricolas might be compared to the influences of Gonzalez or Picasso, who affected Smith in the earlier part of his life, but the Voltri and 'cubi series are from his own individual understanding and experiences with steel. This is why I feel his sculptures are still visually strong because in its making he set new and undiscovered aesthetic problems that had no past or present rules attached to them. Smith himself once said that the "only rule was no rules".<sup>5</sup> and this statement I feel relates strongly to his development as a metal-sculptor.





CUBI IX 1961



FOOTNOTES: Chapter III

1. Thomas Hess interview taken from Garnett McCoy's 'David Smith', p. 175.
2. Rosalind Krauss, Passages in Modern Sculpture, p. 165.
3. Hilton Kramer, David Smith, County Art Museum, Los Angeles (1966).
4. David Smith, David Smith by David Smith, edited by Cleve Gray, p. 16.
5. Thomas Hess interview taken from Garnett McCoy's 'David Smith', p. 175.



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