PLAY SCULPTURE: FORM DEVELOPMENT DERIVED FROM AFRICAN FOLKLORE

by

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Being a research project report submitted to the Postgraduate School, Ahmadu Bello University, Zaria Nigeria, in partial fulfilment of the requirement of the degree of Masters of Fine Arts (M.F.A.) in Sculpture.

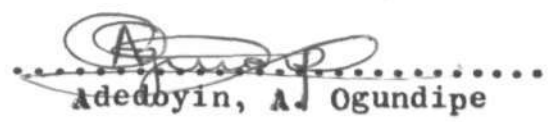
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D E C L A R A T I O N

I, Adedoyin Ayodeji Ogundipe do solemnly declare that this project, Play Sculpture: Form Development Derived From African Folklore, which involves the design and execution of play sculpture and documentation of literature was undertaken by me.

That I have also duely acknowledged all sources of materials consulted and included in this project.



.....
Adedoyin, A. Ogundipe

.....3/12/88.....
D a t e

C E R T I F I C A T I O N

This project report titled "Play Sculpture: Form Development Derived from African Folklore by Adedoyin Ayodeji Ogundipe meets the regulation governing the award of the degree of Master of Fine Arts M.F.A. (Sculpture) of the Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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D E D I C A T I O N

This thesis is dedicated to God, to Him be the glory and honour for granting me the grace to complete my course.

To my parents Mr. and Mrs. J. O. S. Ogundipe, who shouldered the responsibility of my education in addition to their words of encouragement. Finally, to my younger brothers and sister - Wole, Folake and Deinde for their love, concern, understanding and prayers.

May God be with you all (Amen)

A. A. Ogundipe (Miss)

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A B S T R A C T

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The most commonly found play structures in Nigeria are too monotonous and stereotyped, with little or nothing new to challenge the child. There is a need for the development of new and varied types of sculptural, play forms that will both challenge the child's imagination as well as enhance the child's learning.

This study utilized primary and secondary sources of information. This includes a review of related literature. Some available works in Nigeria were photographed and also reviewed. This project is an exploration as well as the experimentation of creature play facilities and the documentation of children's reactions on sculptural forms. With such play sculptures designed in this research a child's experience is expected to become richer and more exciting. In the pilot study of studio experiments, play forms adapted

from African folklore themes were developed. One of the sculptures was finally erected in the Ahmadu Bello University Staff School and other issues associated with structural problems and construction were noted. When the construction were completed children were allowed to play on the sculpture and their reactions were closely observed.

This study has proposed several suggestions as follows that;

1. Various sculptors should attempt to develop play sculpture based on his/her individual uniqueness and expressiveness.

2. Further, exploration on how play sculptures could be derived from African folklores should also be carried out.

3. The Government and Schools Authorities should invest in making children's play facilities more exciting for the children, especially through play sculptures.

4. Seminars and Symposia are necessary forums where this topic would be discussed to educate the larger society.

5. Town planners, architects and artists should come together to discuss the importance of play sculptures in the environment since each has a role to play in its effective utility.

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CHAPTER - ONE

I N T R O D U C T I O N

1.1 BACKGROUND AND PROBLEM

Play is any activity engaged in at leisure. Everyone plays - be it a child or an adult. Everyone needs to reactivate energies expended during the day's meaningful work. Among children, play comes as a means by which the environment is is internalized as well as a means through which future adult roles are pretested.

Play in children could be divided into two groups; passive play and active play. Active play is a form of reactivation of energy which involves physical exercise for example running, jumping and sliding. Passive play is an 'inert' form of play in which the actor acts more like an observer, for example watching television.

Much as play is important, to a child, it seems that designers of play facilities through the ages have neglected this vitally strategic role of play in a child's development. Designers in providing housing furnishing tend to

assume that once their needs are met, then the needs of children are automatically guaranteed. A survey conducted by Wilkinson (1980); has shown that children form about forty percent of our total population. Going by this statistics, it is bizarre that a large section of our entire populace indeed the biggest potential assets of any country, could be so ignored in the designing of public facilities.

In the day to day activities of the child's life as he runs he develops himself in several fields - intellectually he gets aware of his environment, morally as he collaborates with people he begins to learn the need for co-operation and team work, physically he strengthens himself. These endeavours are essential needs that should be met for a child's proper development. As a child gets along he is faced with the activities like touching, feeling, climbing and sliding as he gets involved in different physical activities.

Even when designers attempt to provide for this vitally important aspect of child development they tend to easily assume that such over prescribed facilities like seesaws, slides and swings are the

inseperable answer. This is particularly so when one takes a cursory glace at play equipment in Nigeria. This equipment provides for only familiar challenges and consequently boredom as children yearn for new excitement.

This research attempts to expand the array of facilities provided for children's play by developing sculptures which provide for broad uses so that children could find a wide range of experiences and challenges in one single equipment.

Play is an active physical movement which develops mental concentration, emotional stability and social growth. These processes however, are not mutually independent, they need each other for possible all round development. Young children are happiest and learn more quickly when they are moving, talking and sharing in the process of an activity. Through play sculptures a basic foundation for efficient learning in the younger classes could be laid. For example through sculpture a child can see visually what is being explained to him - the ability to identify shapes, colour and form could develop because of the elements imminent in the play sculptures. The researcher shall attempt to meet

the need for interaction, enhancement of language and fluency, irrespective of the child's background and limitations.

It is intended that the researcher's studio works sculptures - shall attract children and set them thinking, develop their ability to appreciate forms with which they are playing. This perhaps will help them relate these forms to their past experiences.

This research shall attempt to develop play sculptures necessary to enhance challenges and experiences ranging from things the child can master to things that require skill and agility. This will give the child an opportunity to be a participant in his environment, by participating in whatever activity he wants to.

1.2 SPECIFIC PROBLEM

The aim of this research project is to document the process and product of form development from African folklores (play sculptures) which have been executed. The proceedure adopted in the process include;

(a) Designs of several models of play sculpture for Ahmadu Bello University Staff School, Zaria reflecting active play.

(b) A suitable site in the School to be identified and one of the marquettes to be executed there.

(c) Marquettes are to be attempted from a variety of media for play sculptures in abstract and stylized forms with the view to enhancing varied types of play among children.

(d) Observation of children in play structures to identify children's emotional reaction as it relates to play that offers not only artistic features but enhances intelligence and physical ability.

(e) There will be an exhibition of all marquettes, drawings and other play sculptures relating to this research.

1.3 SIGNIFICANCE OF THE STUDY

In designing play facilities for children's recreation, it appears that most avenues for creative play have not been explored. As mentioned earlier a broad glance at Nigeria tends to reveal

that little or no adventure is consciously provided for.

Wilkinson (1980); identified three stages of child development as growth, learning and living inherent in the play process. In order to nurture and encourage creative play for children particularly in our society today, play sculptures are the answer to above, sculptures that shall attempt to satisfy all the stages of development in a child's life.

In the Nigerian society today, play forms have existed for quite sometime and there are almost no new innovations tending to reflect the rapidly changing society. Perhaps this made UNESCO (1976); to observe the inadequate preparation for children to live in a rapidly changing society. Play forms could be a point where children could while away time, while working mothers go to work. In effect, these play sculptures serve as creative recreation for such children.

UNESCO further refers to the increasing commercial exploitation of children through mass production of play facilities leading to deterioration of individual values and cultural

tradition. This tendency towards mass production could be seen in play-grounds where only seesaws and other conventional play structures tend to be dominant.

Play sculptures if adequately utilized could provide for the child's academic needs. Through colour, shapes and forms provided, the child could learn to identify colour if used, he could also learn to concentrate. All these could become a basis for language building and opportunity for initiative, interaction, creativity and socialization with the material world around him. Thus, the child could be eased of boredom on the one hand, and made happy and helped to learn on the other hand. Non-representational play sculptures develop the child's mental capabilities. Where the forms are non-figurative, the suggestiveness of the utilized form tends to highten their curiousity, a trait which is very vital in a child's learning process.

Play is a way of learning adult roles, Wilkinson (1980). He learns to be responsible orderly and even co-ordinate his mates which prepares him for adulthood and helps develop leadership qualities.

Emotionally, play is essential for children. It creates a forum that fosters the acceptance of all children so that no child feels left out, Malta Consultation (1977). The researcher's play sculptures could also serve as an environment where each child can build inter - personal relations. Play sculptures could be designed for multiple activities to accommodate a lot of children at a time. Thus, enhancing adaptability and sharing.

The researcher's studio experiments shall be geared towards developing the child physically as he runs, jumps, climbs and performs other activities. These activities are essential for a healthy body. It could further help in creating a sense of order in a child. He begins to view form and knows which is beautiful and further goes on to relate this to his environment.

It is hoped that this problem shall provide opportunity for the researcher to design play sculptures that will encourage play act, and enhance social interaction amongst children through utilization of the geometric and the realistic. This study shall make recommendations such that sculptures could be brought closer to children

adequately, for example, in schools. It is also hoped that parents will be enlightened on the functions play sculptures in their children's development. Schools and the society as a whole will appreciate the aesthetic as well as recreational opportunities play sculptures provide.

1.4 ORGANISATION OF THE PROJECT

Chapter one of this project deals with an introduction which consist of the statement of the problem, a synopsis of the facilities provided for play and significance of the study.

Chapter two will be the review of the literature consisting of the definition of the term play and the history. It will also discuss the stages of a child's development, his behavioural pattern, the child's play sculpture and his environment and the relationship between the child and his play items. Also a philosophical approach to construction and modelling will be discussed.

Chapter three shall deal with the methodology adopted in this study, chapter four will present a report of studio experiments, consisting of detailed

descriptions, samples of play sculptures executed as well as folklore stories used in forming their design. Chapter five shall be findings from the sculptures and chapter six, an interpretation of the findings. Finally, chapter seven will be the conclusion and recommendation.

CHAPTER - TWO

REVIEW OF RELATED LITERATURE

2.1 CONCEPT OF PLAY

Play is defined by Dattner (1969) as any physical or mental activity performed in self amusement. This include all active exercises undertaken freely and voluntarily but divorced from all gain of no reward beyond itself. Recreation and play have been confused, but Farrant (1964) views recreation as period apart from sleeping and dozing in which no purposeful activity appears to take place. Vigorous enjoyable activities is therefore, classed together with play activity not recreation. This study shall view play as it affects the child.

2.2 HISTORY OF PLAY

"Nature wills that children should be children before men. If we insist on reversing this order we shall have fruits early indeed but unripe and tasteless. Childhood has its own way of seeing, thinking and feeling." Rousseau (1911).

Research into child psychology started in the nineteenth century, Roborts (1980). From this account very little significance was given to the place of the child in all aspects of public planning. As reported by Macarthy and Houston, (1980) primitive and preindustrial societies rarely provided for play. They merely based their expectations of people generally on age and sex. This expectations were heavily based upon adult life and what was deemed as gainful.

Children usually participated in the day to day affairs of their elders, as a result they gradually absorbed the beliefs, and habits and attitudes of their family and tribes. Meaningful play among children therefore, was the sort that represented a mock trial of future adult exercises; like hunting and fishing for the boy, and for the girls cooking and other house-hold activities. These activities it was assumed prepared them for the responsibilities and rewards of later life. Children of about four years of age were sent to live with masters in chosen trades.

In the early days of industrial revolution, Western Europe and North African families simply

transferred assumptions about child-hood development in one set of conditions into new circumstances. Children worked long hours in coal mines and factories amidst noise, dirt and danger of industrial production. The effect of this was the enactment of laws, prohibiting children from being employed as workers in factories and industries. This action was big relief for children but for parents, because they were cut off from the everyday activities and interests of their parents.

One could therefore, conclude that play gradually developed from the imitation of adult ceremonies and activities. Generally no child learns to play from pages of books, it is a psychological disposition inherent in children. Play like growth in children is in stages and children need to be left to grow gradually.

The growth of specialized child care services (teachers and educational psychologists) seems to have eclipsed roles in educating parents apprehensive about their dwindling role in the fashioning of the childrens fate. Even so today, children are trained by these experts in day-care centres, nursery schools and primary schools. Play began to change from

performing adult roles to playing with specifically designed play forms like the swing, seesaw and slide.

The situation in Nigeria is the same. Play emanated from activities like story telling, hunting animals and fishing. Cooking and dancing were part of the activities for the girls.

2.3 THE IMPORTANCE OF PLAY SCULPTURE IN A CHILD'S ENVIRONMENT

The importance of play sculpture in a child's environment cannot be overlooked. The researcher shares Froebel's (1985) view that there is a need for a balance between an individual freedom and society's responsibility to socialize the individual. Play sculptures therefore, could be one of the most natural and effective ways for a child to learn and develop his ability. While this is generally accepted efforts so far have not been made to develop play forms such that a child will learn as much as he can through these forms.

The need for meaningful play must be encouraged and enhanced to break monotony and create new challenges for the child's daily life, Brittain (1979) Moses (1952) stated that Noguchi saw vacant

space as a prevailing threat to a child's fantasies and therefore, advanced a need for a play-ground where the child could play in his full innocence. Brittain and Moses perhaps under-estimated the power of sculptural play forms in the overall achievement of their insight into "meaningful play" for the child. Thus, sculptural play forms that will provide activities which are stimulating and productive for learning opportunities must be encouraged.

These activities, the researcher believes, could help develop the child's ability to manipulate skillfully and symbolically all advanced human endeavours - science, art, literature, social relations, language development and intelligence.

In most, if not all nursery and primary schools today play is an important aspect in the child's curriculum. The school environment encompasses generous play-grounds as well as facilities for pleasure and health, amongst other educational functions. This tendency rules out the idea that what is done in school is work and outside the school is play. However, play is vital to the child's all round development both in and outside the school environment.

Evan's (1971) has also expressed a similar idea. Play according to him, is a way through which a child reconciles his inner lifes with external realities. Following from Evans, the researcher would advance that through sculptural play forms children could gradually develop concepts of casual relationship, the power to discriminate and make judgement, to analyse and synthesise, imagine and formulate ideas. Inert educational system would then have no strong influence upon a child's natural activities. Some psychologists (behaviourists) have maintained that the environment influences the development of the child. For example, a child may come to school feeling very hostile towards concrete learning due to his new environment, but his ability to adjust depends greatly upon the school environment - other children, the play facilities, his assumptions and values about the teacher, the school organisation in which he is supposed to assimilate himself as well as concretise on the tendencies and values he brings from home. When a child is in a new environment play sculptures could help open up the child to enable him develop fast. A child is most intimately affected by every aspect of any design.

In designing for play to improve the environment it is the child's interest, excitement and curiousity that must be considered. This is important because whatever the child learns becomes a part of the way he see the world around him.

The researcher hopes that incorporating play sculptures into a child's environment may transform the growth and turn down the urges to bad ends into positive actions. This study is aimed at encouraging the child through the powerful forces inherent in him to influence him towards all that is good and worthwhile.

2.4 DEVELOPMENTAL STAGES IN A CHILD

Childhood has its own way of seeing, thinking and feeling. For example, it has been observed that as children grow their form of play changes gradually. Houston and Macarthy (1980) have categorised socialization (development) into three stages - independent play, associative or parallel play and co-operative or group play. Psychologists have also discovered a lot about the ways in which children think and the developmental stages they pass as they approach adult ways of looking at the world.

In the first two years, the child operates on the sensory motor. At this stage a child's thinking is largely restricted to what he sees and on his physical movement. The richer a child's environment the richer is the visual experience at his perception. At this stage the child is curious and he desires to explore and manipulate his immediate world. Macarthy and Houston (ibid) refer to this stage as independent play, at this stage the child remains egocentric. Although, he has a grasp of objects, and how people and things exist apart from himself he still focusses upon his own needs and interests. For the most part he plays alone.

At about the age of five, the cummulative effect of experience and practice begins to mould the child's internalised model. The child begins to learn the principles of conservation of volume, length and the basic nature of things. He begins to explore texture-smoothness, roughness, stickness, wetness and dryness. He also learns the nature of, for example, the difference between pouring water and dry sand, fluidity and solidity. Play forms designed for this group should aim at satisfying these needs.

As a child grows older he becomes experimental and adventurous. He tries his hands on just about anything that is within his reach. This trial and error approach sounds as a veritable means of acquiring knowledge. Play at this time gets highly associative. A child of this age tends to play collectively even if individually. He is interested in other children and wants to associate with them. This outward thrust of mind is an important positive step in the process of social development.

At the age of ten - the concrete operational stage - the child begins to appreciate the world as a stable place. He begins to know a lot about space and the location of objects within it. He learns to share the joy of satisfying his curiousity. The desire to please teachers and parents may keep him working hard and apparently learning a lot.

It is probably a sense of not really understanding that lays the foundation from later rejection of school and its values in adolescence, exhibited in antisocial behaviour, lack of interest in school and so on. Sometimes a child in the early stages is exposed to knowledge that is too concrete for him which affects him in later life.

Houston and Macarthy (ibid) refer to this stage as the co-operative and group play. Slowly, a child begins to co-ordinate his play with the play of others, and he begins to learn how to share which is vital in social life.

2.5 A REVIEW OF SOME RELATED SCULPTURES

The development of play sculpture, no doubt started with architects and sculptors working hand in hand. A few play sculptures have been executed by some sculptors while other sculptures might have suited what Macarthy and Houston advocated for, but which lack a few essentials for creative play. From the pre-historic times sculptures have been esecuted to enhance the environment. Just like adults, a child is attracted to these sculptures, he wants to go a step further because of the tendencies inherent in him. The urge to feel, to run through needs to be satisfied without this, his ability to appreciate sculpture and interact with it might be limited.

Gaudi's work seems to have turned from nature to the field of imagination, dreams and poetry. He used natural forms which he had employed representationally and expressionistically in his buildings. Another personal characteristic of



PLATE - I: Details of Surrounding Wall
Park Guell Barcelona (1900-1914)
Anton Gaudi (Concrete)

Gaudi's architecture is the emphasis laid on architecture as sculpture, on the building as composition in which each detail plays an aesthetic role in the totality. Gaudi though an architect had the ability to use space in bringing out structural forms and incorporate a lot of textures, colour and the abstract sculptors approach which is evident in his works - "details of surrounding wall." Park Guell, Barcelona (1900 - 1914). This work is a simulation of a curving wall and benches which is suitable for running, climbing and hide and seek for the child. The twisted mass with the brilliant coloured mosaic are some of the elements that make it suitable for playing to a child.

Babara Hepworth - "two segments and a sphere" (1935) worked using masses and the sculpture is reminiscent of an African grinding stone. This work could serve as a climber for a child if it had steps, because the sculpture seems to be steep for a child to climb.

Her sculpture "wave" (1943) could also serve as a very good climber. However, a problem in this sculpture is its limiting nature, there are not many activities for the child in addition to its

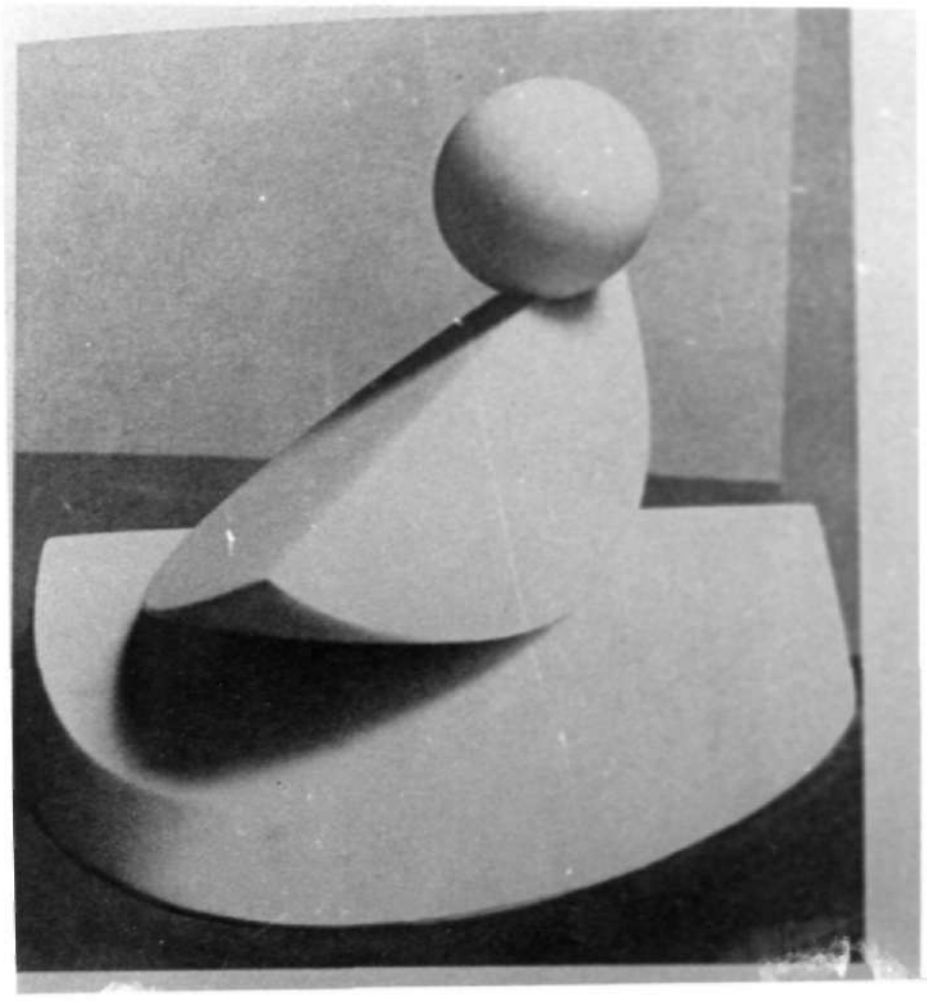


PLATE - II: Two Segments and a Sphere
Marble Height 12 inches
Babara Hepworth

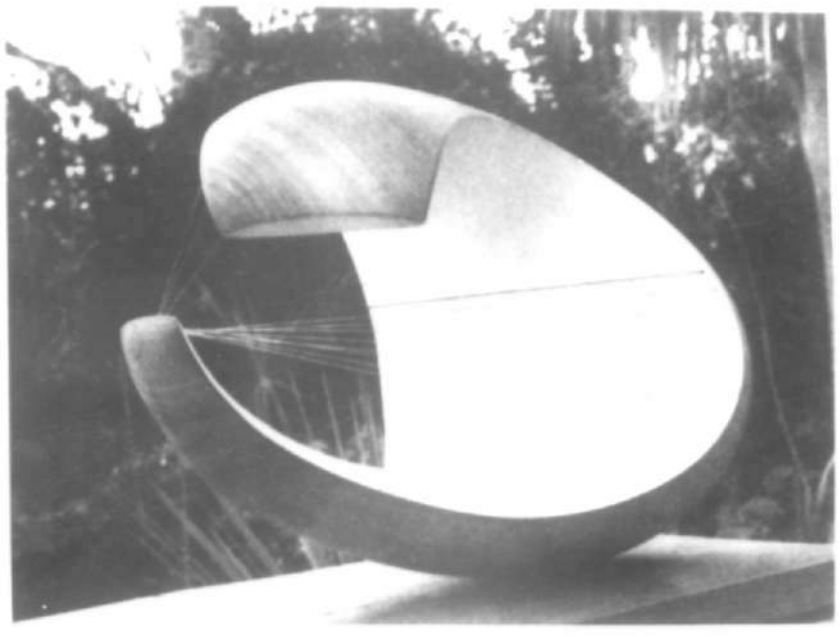


PLATE - III: Wave
18½ (Wood and String)
Babara Hepworth, 1943.

being steep at some points. This sculpture has a similar concept of using basic geometric shapes. However, similar to plate - XXV (wood construction) which has more facilities for climbing and easy accessibility required for play activities.

Looking at Isamu Noguchi's sculpture "monument for heroes" (1943) which is monolith, it seems suitable mainly for sitting and climbing to an extent. Its textured surface could attract children in terms of feeling the rough and smooth points. However, these activities do not seem to be adequate to keep the child occupied while playing and are not challenging enough.

Noguchi also designed a play-ground for kodomo No Kuni (children's land) near Tokyo in 1965, which consists of a dome with steps and other facilities. He further made studies for slides and a model for United States Pavellion at EXPO '70 (1967). Here he utilized brilliant colour to make it very attractive and exciting for the child.

Considering Pavsners work, "dynamic projection" (1950) the spiralling shape has the tendency of carrying the eyes of the child round the sculpture and the next thing he wants to do is climb. The sculpture



PLATE - IV: Kodomo Nokuni (1967)
Japan
Isamu Noguchi
Roof of Corelo Steel
Ceramic Tile, Cement, Ground of
Crushed Brick.

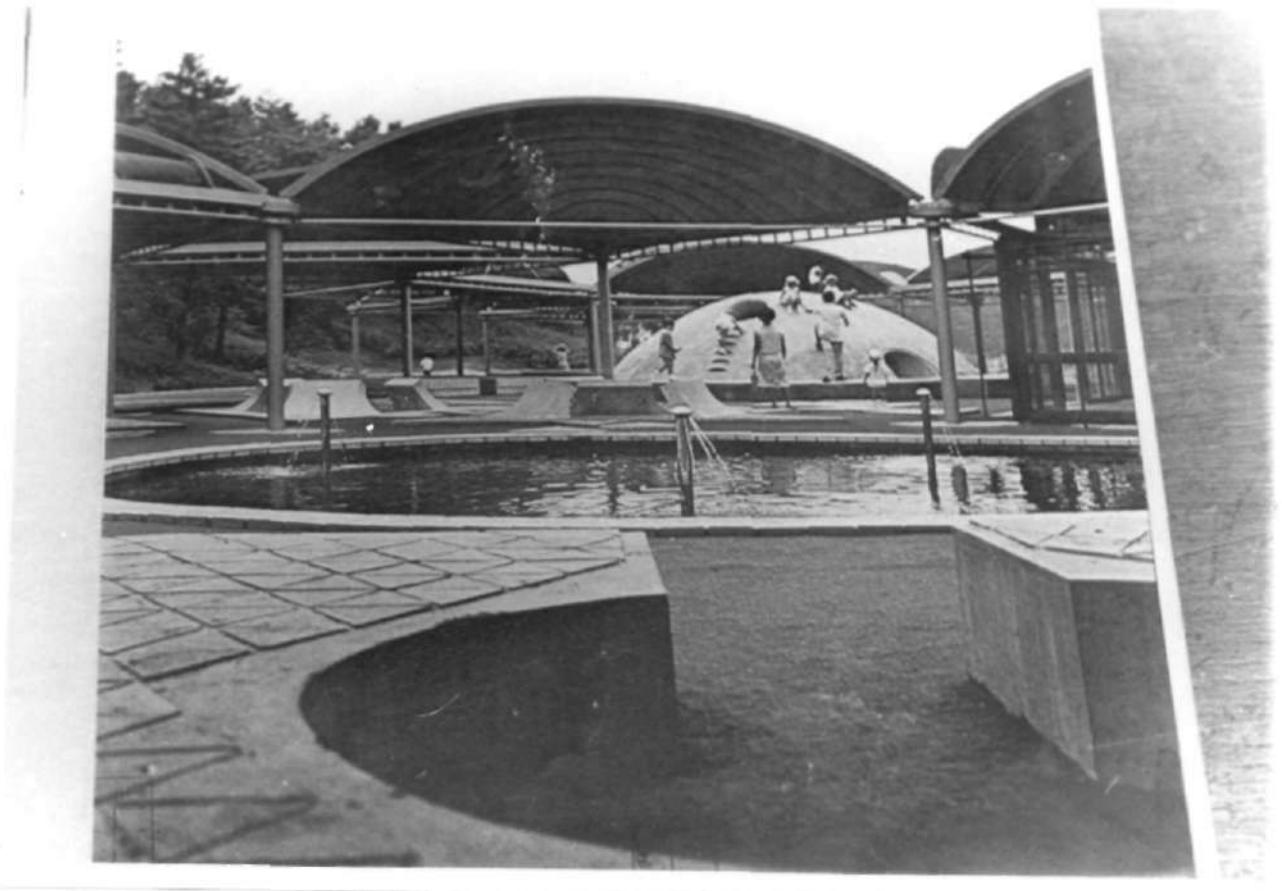


PLATE - V: Model for U.S. Pavillion at EXPO '70
Garden of the Moon, 1967.
Isamu Noguchi.



PLATE - VI: Dynamic Projection
96 inches
Bronze
Anton Pevsner, 1950.

seems suitable for hide and seek but it is limiting because it lacks internal and external space and some parts of the sculpture are steep for the child.

Henry Moore's sculpture, "Reclining Mother and Child" (1960) has an interesting play of space which seems to be inviting attracting the child to want to climb through. It is not only enhances easy passage, it could serve for sitting and climbing for child. Him "King and Queen" (1952) has space invading the work but its elongation does not allow for easy passage. The flatness and slimness of the sculpture is not an advantage for the child's climbing. Hence this sculpture does not seem suitable for a child's play.

Tony Smith's sculpture, "The Cigarette" (1961) would have been an exciting spot for children but for the fact that steps were not incorporated into the work. With the steps a child has an alternative of either climbing up the sculpture or running through it.

Another sculptor, Yaacov Agam in his sculpture "The Hundred Gates" (1971) utilized space in a form that would excite a child. His sculpture would strike an adult as simple and aesthetically pleasing

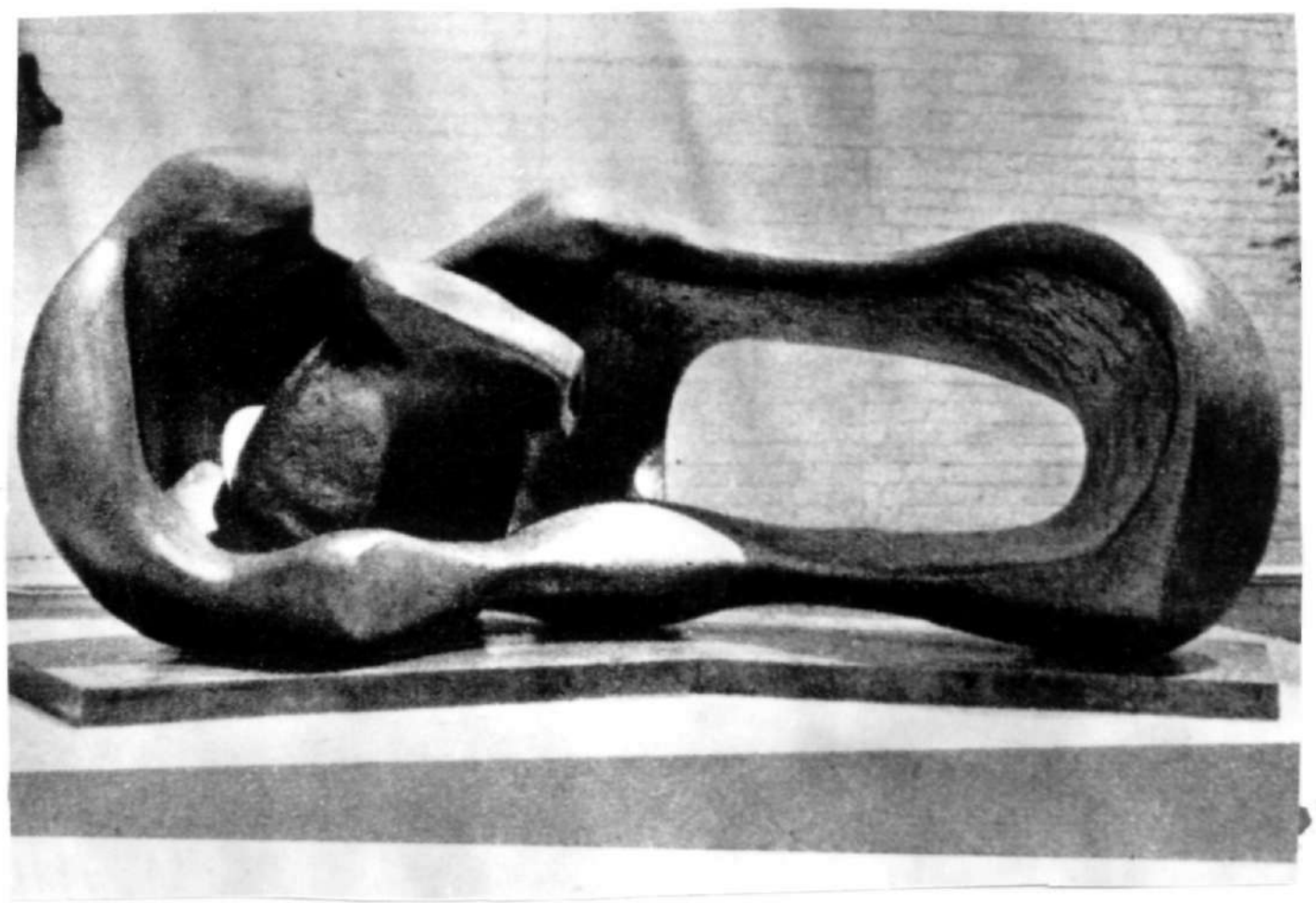


PLATE - VII: Reclining Mother and Child
33½ x 86½ x 54 inches
Henry Moore, 1960.



PLATE - VIII: King and Queen
59 inches
Stone
Henry Moore, 1952.

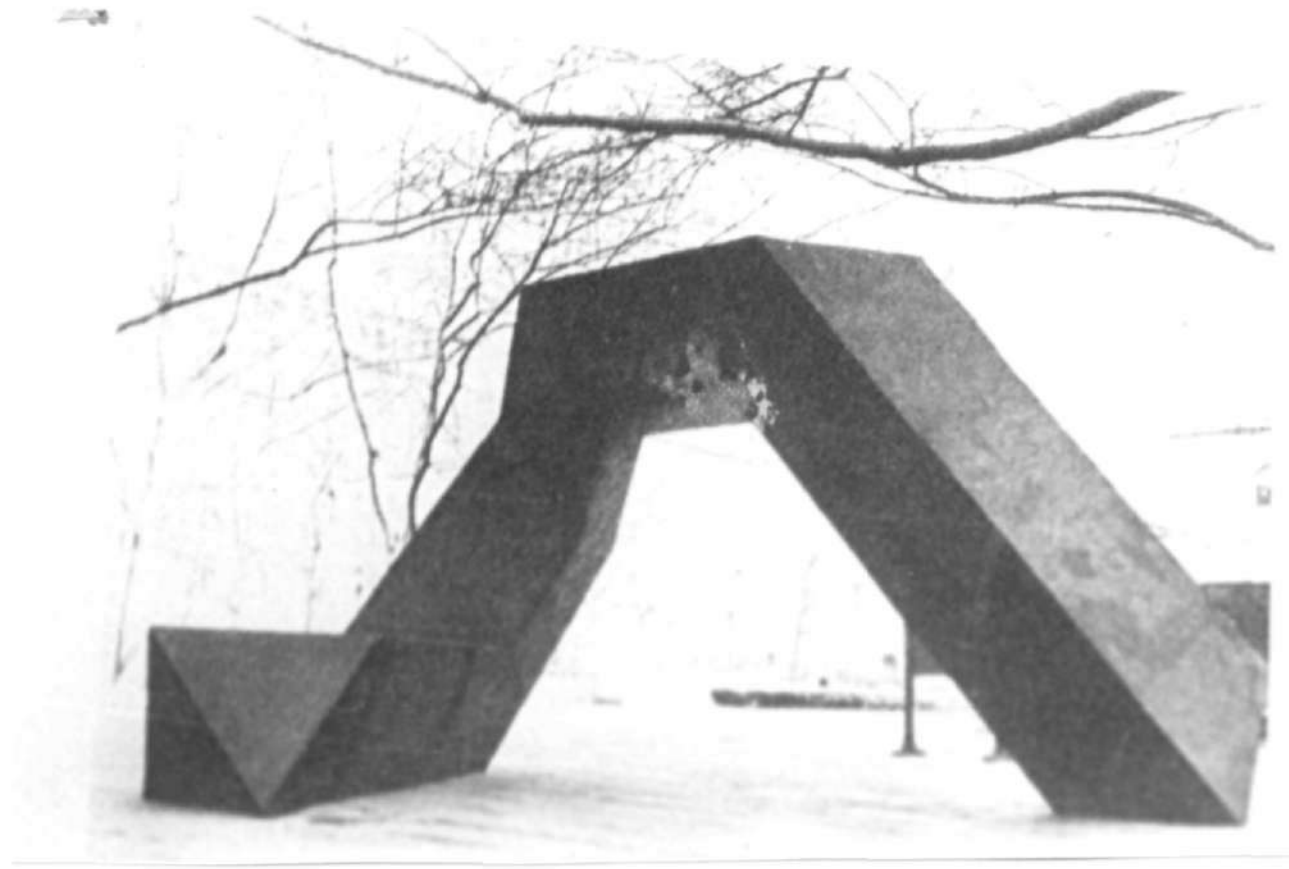


PLATE - IX: The Cigarette
15 x 26 x 18 inches
Ply-wood
Tony Smith, 1971.

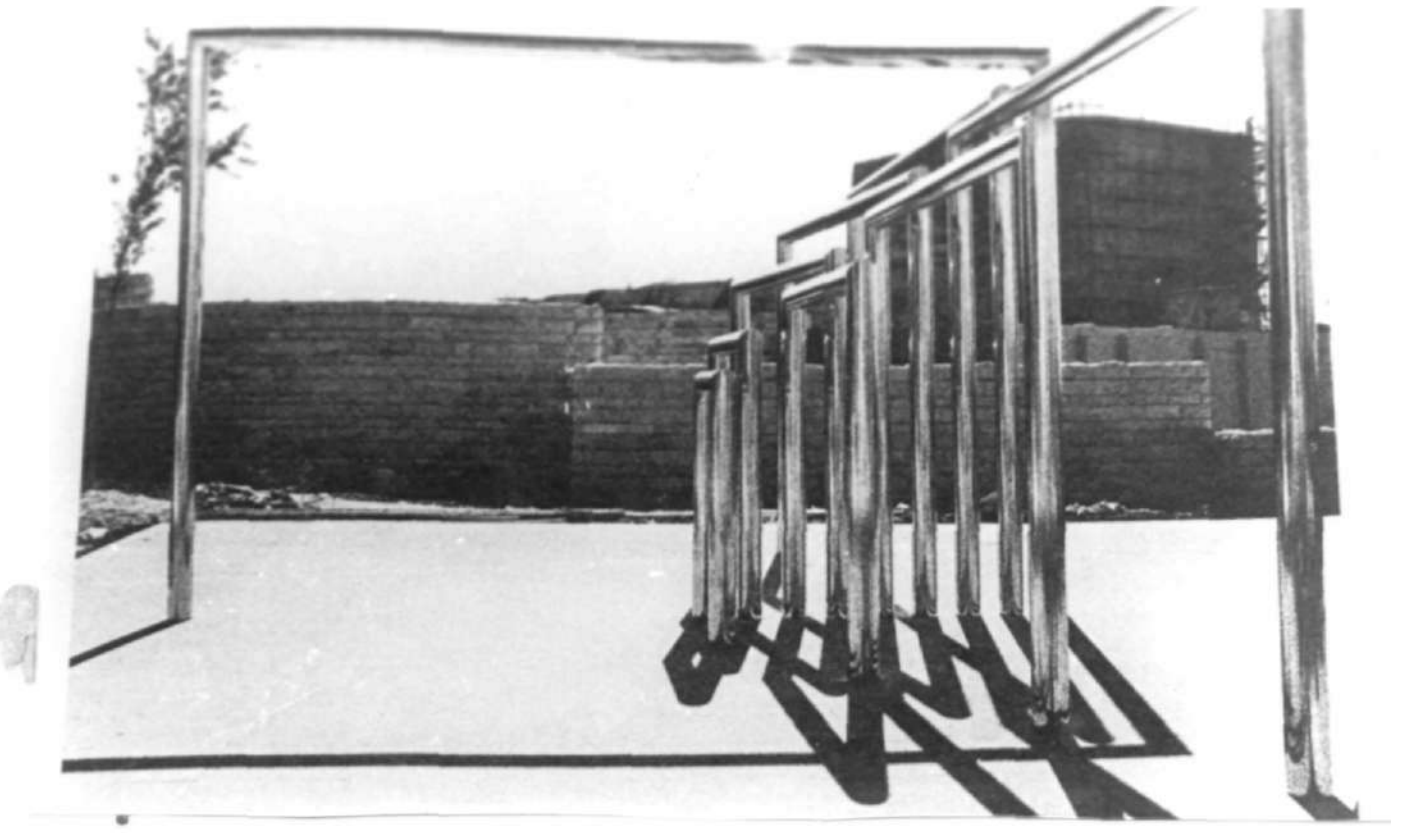


PLATE - X: The Hundred Gates
13 x 15 inches
Stainless Steel
Yaacov Agam, 1971.

but for a child, the first thing that might cross his mind is how to climb the poles in this sculpture. It would really serve as a very interesting and challenging sculpture for children.

Even some architectonic sculptures could be related with play sculpture. Le Curbusier's famous Building, "Chapel of Notre Dame Du Haut" (1950 to 1954) falls in this category. This building in block form would be interesting for a child to climb and jump in addition to a lot of other activities which the child might conceive.

Viewing the Nigerian situation, the importance of play seems to have been recognised in a child's life. However, the existing facilities seem to indicate that this aspect has not been adequately developed. Looking at play sculptures in the Nigerian context it is obvious that very little has been done.

An example of play sculpture executed in Nigeria is one of the University of Nsukka, by El Anatsuyi "The Mask" (1981). This white mask has a hole in the mouth through which a child can climb,

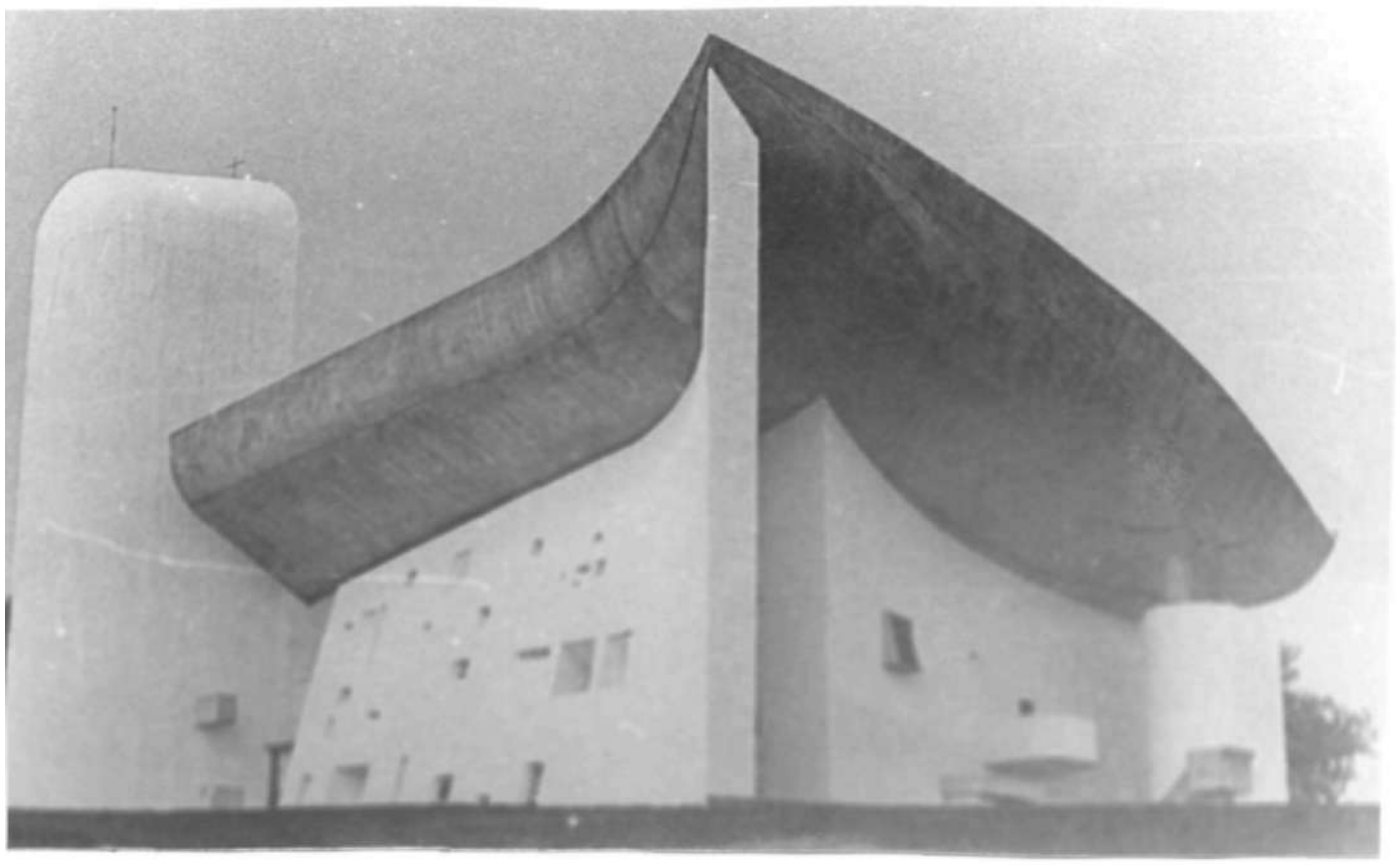


PLATE - XI: Chapel of Notre Dame Du Hunt
Ronchamp, France
Le Corbusier, (1950 - 1954).



PLATE - XII: The Mask
Concrete
El Anatsuyi, 1981.

it also has space around, where a child could play freely.

There is another play sculpture at the Ahmadu Bello University, Kongo Campus, Zaria, "The Giraffe" produced by Salihu Suleiman (1969). This play sculpture though functional is very limiting for a child - he can only climb up and down the form. In addition the sculpture is symmetrical, hence there is not much to look at in terms of aesthetics.

Around this sculpture are other play structures that are worn out due to the weather and lack of maintainance. The play-ground though well marked out as in (plate - XIII) has been abandoned by children because it offers little or no attraction for them. However, if play sculptures are incorporated into this play-ground it would still re-attract children.

Other play structures have been developed by the Apapa Amusement Park. These structures are very attractive for children but are mechanically operated. There are therefore, problems when there is nobody to operate them, which is not envisaged in concrete play sculpture - since no labour for its operation is required.

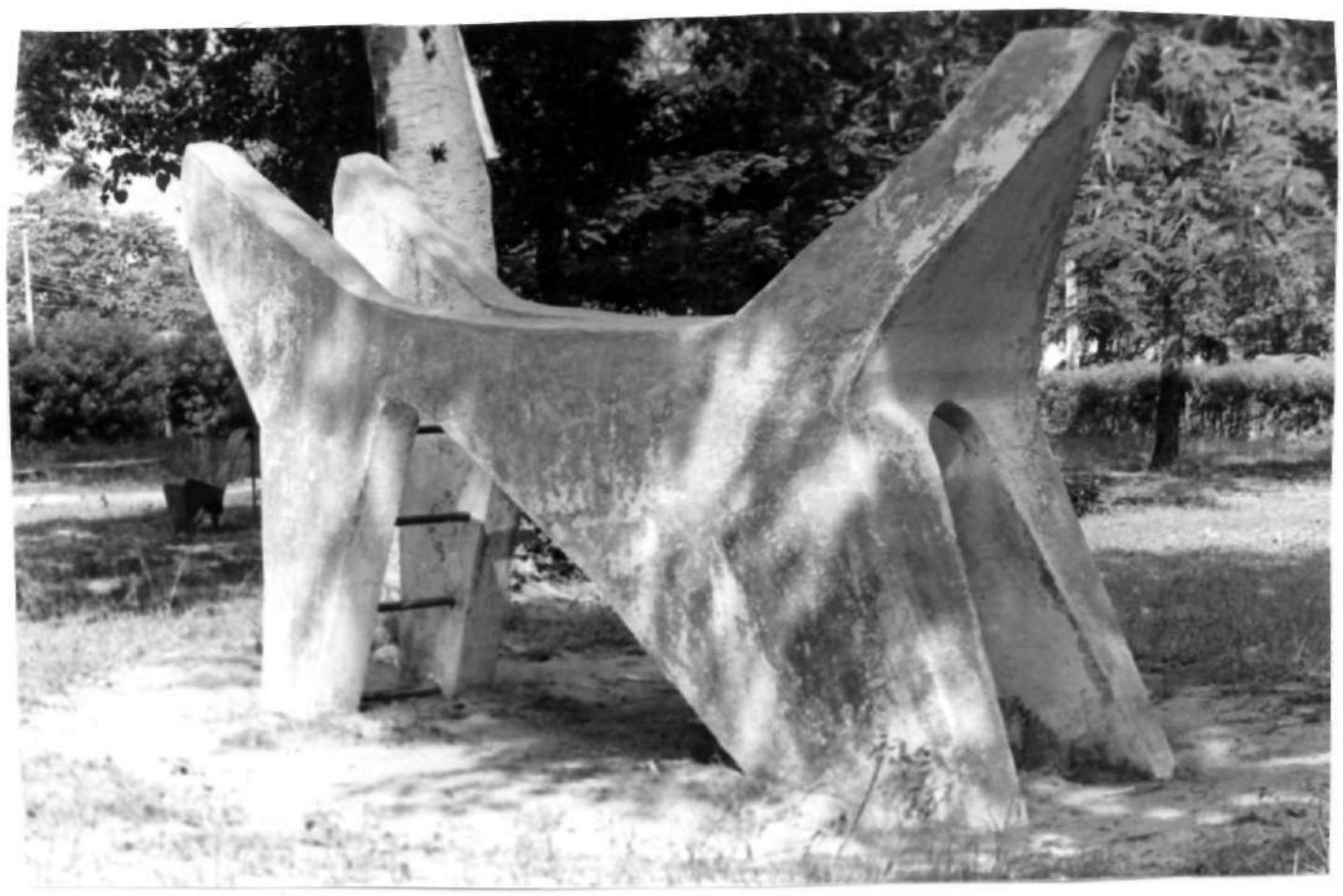


PLATE - XIII: The Giraffe
Concrete
Salihu Suleiman, 1969.

Of recent some State Governments like Lagos and Kaduna have begun the development of play structures for children in various locations. These play-grounds have been well utilized because of proximity to the child's home. However, most of these play forms are slides, seesaws and swings (which are found in most play-grounds) with no extra unusual exciting forms and new challenges aimed at in this research through play sculptures.

2.6 A PHILOSOPHICAL APPROACH TO CONSTRUCTION AND MODELLING

Most play sculptures today are designed with little or no provision for the child. There is a need to incorporate traditional themes (like folklore stories) into a child's play facilities in modern times. This will, as pointed out earlier in this chapter, aid their learning and scope of imagination as we educate them informally about their cultural heritage. A lot of forms would have been suitable for play but there is a need for modification in terms of accessibility, safety and aesthetics especially to the child's taste, recapitulation and enjoyment of play at this level requires past experiences. Play sculptures

therefore, designed based on the stories the child must have learnt will be better appreciated.

A number of factors have dictated the designs of play sculptures in this research. Of importance is functionality (spacial effect) and the aesthetics of the form itself. An attempt has also been made to synthesise the constructivist and modelling approach. The 'Giant Foot' sculpture marquette for instance was modelled, while the actual work was constructed (though it looks modelled). At the marquette stage the process of trial and error and altering as typical of the modelling approach ensued. However, with the actual sculpture the reinforced concrete method of casting made the process mechanical, while at the same time adopting the constructivist approach.

Art is fundamentally everywhere and always the same, nevertheless two main human inclinations opposed to each other appear in it. The one aims at direct creation of the universal beauty, while the other aims at the aesthetic expression of oneself, thoughts and experiences. The first represents art objectively and the latter subjectively. Thus, works of figurative art desire

to represent beauty objectively, while the subjective school must of necessity result in individual expressions which veil the pure representation of beauty. For the researcher the search for a unified expression through the balance of the two opposites has been a problem. However, the subjective school has been more relevance to this research.

2.6.1 Development of Construction

Constructivism is actually a movement of independent origin. It developed from the movement known as suprematism which was founded in Moscow in 1913. Architects and engineers have as much to do with its formulation as painters and sculptors. In 1920 the constructivist movement developed as a revolutionary movement in the arts as a result of a fierce debate involving the principles of marxism, dialectic materialism, socialism and realism. The constructivists revolted against the whole conception of naturalistic perfect art. The theoretical background of the constructivist is therefore, based on their manifesto of

1920. In this manifesto they declared;

- to communicate the reality of life, art should be based on the two fundamental elements of space and time;
- that volume is not the only special concept;
- that art should stop being imitative and try instead to discover new forms;
- that kinetic and dynamic elements must be used to express real nature of time.

Therefore, constructivism is closely allied to engineering and seems to establish a non figurative art which makes use of technical methods of modern construction. Of fascination to Gabo (a constructivist) is something which breaks away completely from the European academic art.

This theory is based on a revolutionary approach that requires a re-adustment of the facilities of perception.

There is no place in constructive philosophy for external absolute truths. All values and truths are constructions subject to change of time and space. Therefore, the researchers philosophy

demands for the right to construct a visible image of that reality which is being created by the contemporary human spirit. The deliberate choice of perfection in the writers sense is not a state but a process, not an ultimate goal but a process.

The researchers play sculptures as a medium of expression is claimed to be still in its very tend age. Its roots are strengthened in the more solid soils of the whole human mind. This philosophy could fit in with all that is troubling and exalting the creative spirit of present age - it has to have its place not only sociologically but also mentally and spiritually for the child. It also needs to have an aim and a direction, it appeals principally to the mind and secondarily to the senses. In this philosophy there is no difference between art and science, they are both art; between technique and knowledge, they are both skills. Also in this approach the image of the primitive is just as true and real as the image of the world today. It is true because each image represents the events of that time represented. It is left for one to choose, according to which of these images appears to be more coherent, harmonious, cogent and above all, acceptable, as

a means of orientation in life. The researcher's ideas recognise only one stream in our existence - life. Any action that enhances life propels it and adds to it, in terms of growth, expansion and development. How this is achieved is of secondary importance. Art is seen as the most immediate medium for communication to others, the rhythms and state of mind one wishes the world to be in. However, perceptions are not taken as they come, they need an order. Man constructs the image of the world as he wishes it to be. It is man-kind that shapes it in certain order out of mass coherence and inimical realities. Hence, for this research space and time are the only forms on which life is built. A description or concrete representation of time and space is desired. The aim of the researcher has been to give a clearer vision of true reality.

The researcher also renouced volume as a pictorial and plastic forms of spac ; one cannot measure space in volume as one cannot measure liquid in yards. Therefore, depth as the only plastic form of space is affirmed.

Furthermore, in the play sculptures designed mass as a sculptural element is renounced. It is known in engineering that the static force of a solid body and its material strength do not depend on the quantity of mass, for example in a 'T' beam. Thus, the researcher claims in sculpture the line as a direction and in it affired depth as the one form of space.

A pure representation of 'beauty' cannot be achieved by individual expression, that is by the expressive means which are personal and subjective. Instead it is advocated that in creating things like chairs, tables, the labels of their owners should be removed leaving only the reality of constant rhythm of forces in them. These are the fundamental principles of the construction technique in this research.

Art is vital to folding epoch of human history. Utilising traditional themes, as in African folklore, the child's imagination is allowed to wonder from his experiences in the play sculptures, he learns and is challenged and this makes him curious. These play sculptures therefore, contribute to the society and our time in

particular by incorporating past events - folktales into present day.

2.6.2 The Modelling Approach

Moore is common with artists of his type believe that behind the appearance of things, there is some kind of spiritual essence. The essence is this research has resulted in the punching of the hole where children pass through. This spiritual essence is a force or immanent being which is partially revealed in actual living forms. Those actual forms are as it were, clumsy determined by the harpharzard circumstances of time and place. Moore seeks a kind of fidelity represented by Central Asian Sculptures. It is known by art historians as the Animal style. This is because it finds its most characteristics expression in the representation of animal form. In such representations there is no attempt to conform with the exact, but the casual appearance of the animal, and no desire to evolve an ideal type of animal. From the movement and the animals' habit the artist was able to select just those features which best denote its vitality. He exaggerated these and distorting them until

they cohere in some significant rhythms and shapes, then produced a representation which conveyed the very essence of the animal. This approach shall be utilised by the researcher in achieving some forms for play sculptures. This survey has attempted to modify the human form by a desire to relate human form to certain universal forms which may be found in nature. However, the forms have been adapted from folklore stories and modified to suit the children's play sculpture. This is to say that the researcher makes herself familiar with the ways of nature, particularly the ways of growth - that he can out of the depth and sureness of that knowledge, create ideal forms which have all the vital rhythm and structure of natural forms.

Beauty is also expressed in terms of vitality - a pent-up energy in an intense life of its own, independent of the object it is representing. For the researcher, the fact that a work does not aim at reproducing natural appearance, does not imply it is escaping from life but may be penetration into reality, the provision of pleasant shapes, and colour in a pleasing combination. In this case, the researcher is

not generally setting out neatly defined set of aims. Rather the forms are suggested through intuitions and sensations derived from folklore stories and personal physical experiences.

The researcher utilized folklore stories and his own physical suggestions given to him by the form and texture of his materials and his tools.

In designing this kind of forms one sets out on a trip of exploration, making many false turns, retreating occasionally, but also persisting always moving and gradually approaching his destination. There are two sources of inspiration. One of them is found in African folklore, the other in the sculpture itself. Hence, having taken his cue of theme or motif, the researcher finds that there is contemplation, not a dead or fixed idea but is full of suggestions, as to how best the form will fit into its function.

A particular illustration of vitality is again seen in the tendency of vital art to avoid symmetry. Symmetry leads to the mechanical repitition of the same form. This could make a sculpture less interesting and monotonous

especially for children. This is the reason why a full three dimensional realization of form (fully in the round) has no two sides connected with asymmetry. For a symmetrical mass being the same form, both sides cannot have more than half of the number of different points of view possessed by non-symmetric mass.

There is no doubt that a synthesis of the modelling and construction approach in the researcher's works have created an over-lap which has enhanced balance, rhythm, form and the general enjoyment of the sculpture.

2.7 THE CHILD'S DEVELOPMENT AND HIS PLAY ITEMS

Evans (1971) believes that the function of play is significant in relation to the child's total growth: the cognitive which deals with knowledge, the affective which is concerned with feelings and emotions, and the sensory motor which co-ordinates activities from the brain to the muscles. Each domain therefore, interacts with the other to make possible the development of the other.

In terms of the cognitive domain, the adult's goal is to win but for a child it is mastery. A

A child who spends hours building a hut or foot image in the village play-ground is not so interested in the end result as he is in the making of it. Accidents or time may take his hut or foot image from him but the act of building, destroying or walking away will forever be his. Through play the child reveals what he knows verbally and by physical behaviour, creating an opportunity to check incorrect behaviour. Farrant (1964) further states that between two and twelve years of age children launch out into an intensive search for knowledge. Questions like why, what, who are constantly on their lips.

In the affective domain, play is a spontaneous activity which occurs within freely chosen limits, play therefore, is dependent on choice, and the way a child feels emotionally. While Macarthy and Houston have expressed the experiences and events occuring within the early educational setting as influencing the child's emotional development, in a survey Baughman and Danstrom (ibid) found out that parents who play with their child and who have pleasant daily life enhance the child's sociability. While, a child whose parents do not play with him and whose daily life is unpleasant is less sociable

in his activities. Through play sculptures the unnatural qualities of a child's emotional life could be uncovered to establish sound emotional habits of response, which in turn could produce happy, confident and a well adjusted child.

In order to enhance the sensory motor domain, the child needs to move around - run, jump crawl - co-ordinating all his senses for effective play. Piaget (1951) states that the child needs to interact physically and actively with his environment. He needs to touch, feel, taste, see, smell, hear and manipulate in order to develop a healthy body.

A child reacts with pleasure, shame, fear or interest in the different kinds of situation in which he becomes involved. His inner spirit is as much a part of the child as the body or the mind. A stifling of the one implies an impairment of the capabilities of the other - or even a destabilizing of the delicate balance that exists between the two. As the child learns things with his mind, he is affected not only in the way he thinks but how he acts. Therefore, there is a need for interesting play forms that will attract the child and ease tension from other facts that disturb him emotionally.

CHAPTER - THREE

M E T H O D O L O G Y

The nature of this research problem dicatated an empirical approach. The experimental method of investigation was employed. This includes sculptural designs, construction of forms (marquettes) and finally the building of one of the forms. Observations were also made and data collected according to a set of defined criteria, as contained in the observational guide (see appendix - 1). The following approahces were used for data collection:

i. A Survey of Literary Documents

ii. Studio Experiments

iii. Construction at Site

iv. Observational Study

3.1 SURVEY OF LITERARY DOCUMENTS

A survey of relevant literary sources on play sculpture was done through literature review. A preliminary search was undertaken to identify similar works already carried out in Nigeria in relation to this topic. To accomplish this objective, identifiable existing play sculptures

were reviewed. The purpose of this review is to document photographically to relevant works in the environment as may be available.

3.2 STUDIO EXPERIMENT

The studio experimentation focused primarily on the exploration and development of forms. Nine sculpture marquettes were produced in various materials like Isopon (plastic) wood, bronze and cement. Since the effect of play sculptures cannot be adequately detected from marquettes which were prepared from the pilot study of stuio experiments a life models was constructed. However, the pilot study was used to derive play forms from African folklore stories. In a narrative way, selected African folklores were derived from literary sources. Sculptural forms associated with these tales were identified and recreated. Altogether, nine sculpture marquettes were made and a major sculpture title 'Giant Foot' discussed in this study.

One of the sculpture marquettes was developed and blown to life size. This became the main project for this study. Working drawings were prepared, this includes the drawing of the

'Giant Foot Sculpture' worked to scale. The structural analysis was also done to study what kind of foundation, form-work, reinforcement and concrete mixture will be suitable for the structure. This objective was achieved through the professional advise of a builder (a lecturer in Department of Building, Ahmadu Bello University, Zaria, Nigeria).

3.3 OBSERVATIONAL STUDY

The observational study was a supplementary research instrument. An observational guide (appendix - 1) was prepared. In this guide a set of criteria was out-lined for assessing the effectiveness of the play sculptures in satisfying the play needs of the child.

The Ahmadu Bello University Staff School, Zaria was the chosen site for the sculpture. This is because the school is heterogenous, multicultural and could effectively represent the various categories of people within the Nigerian society, the poor and the rich.

Since the aim of the study is to produce sculptures that will enhance the child's play interests irrespective of his background, the

subject of the study were the pupils of the Ahmadu Bello University Staff School, Zaria. The observational guide was administered on the children while they were at the site of the play sculpture during the usual play sessions of the School. The administration of the schedule was done by the researcher and also seperately by the class teachers. The purpose of this exercise is to use one set of results in order to verify the other - comparatively.

It is difficult and often impossible for the researcher to investigate the entire population of subjects in which they are interested. The need therefore, arose for the sampling of subjects with which the researcher generalized some aspects of the research findings. The target population of this study were the pupils of the Ahmadu Bello University Staff School, Zaria. The research operates on the standpoint that play needs of children are generally the same and the Staff School a representative unit of the population.

3.4 SAMPLING PROCEEDURE

Sampling in this case involved randomly selecting an arm of each class in the school -

reception to class six. The accessible population is representative of the target population. The study sample consisted of seven classes out of fifty-one classes. The total population of the seven classes is two hundred and forty pupils. The total population of the school is one thousand, seven hundred and fifty. As stated earlier, this is a random reflection and there is no statistical reason for the selection except that the researcher intends to sample one class each from each form.

This proceedure ensured that no unit of the population was neglected deliberately except by chance. The class teachers of the choosen classes were sent transmittal letters containing the instructions on how to conduct the test (see appendix - 1). The class teachers were retained in their classes since they were very conversant with the children in their classes.

3.5 ANALYSIS OF DATA

A descriptive approach was used in the final analysis of this study. Data was collected from the studio experimental studies for the exploration and development play forms derived from the African

folklores. These stories were narrated and discussed in a descriptive way.

In the observational study the teachers were given instruments for the measurement of the observational test. A five point criteria was used. This same instrument for measurement were used by the researcher to analyse the children's reaction. This criteria reflected how children respond to the sculptural forms. The analysis was based on simple percentage ratio of respondents against a given population of participants.

CHAPTER - FOUR

CATALOGUE ON STUDIO EXPERIMENTS

The studio experiments as presented in this chapter were developed from African folklores. Seven marquettes which relate to folklore stories have been discussed. The remaining marquettes were geometrical constructions - without folklores associated with them.

The design concept of the marquette focus on sculptural representation of the main characters in the folklore stories. Geometric shaped motifs which are dominant in some African cultures have been explored in developing some of the play sculptures. The works therefore, vary from semi naturalistic sculptures to construction. The stories narrated and the forms recreated are to reflect the society's local values, customs and beliefs as contained in the discussion.

In the construction of the marquettes space was considered of primary importance to allow for easy access and safety within the sculpture for children to play. It is assumed that if the marquettes are constructed on a life size scale children can be engaged in a variety of activities while playing in these sculptures. These activities include climbing, running, jumping, seesaw,

4.1 THE MAN AND TWO WIVES

This is a play sculpture which consists of two seated female figures. The forms portray figures exhausted, nevertheless each figure portrays a uniq unique character. This sculpture has space - both interior and exterior space around the sculpture and underneath it, which makes it cavelike where the children could also pass through and play conveniently.

The sculpture can be said to represent the character of two wives in a Hausa folklore story. Once there was a farmer who had two wives all working on their farm. One day the women said they would not do any more hoeing because they were tired. The husband then played a trick. He made two loin-cloths. The next morning he called his first wife and said to her "I gave this loin cloth to you to tie, but do not tell anybody about it, there is a certain charm for child birth in it, and if you tie it on, you will have a son". When she had gone the man called the second wife aside, gave her the loin-cloth and told her the same thing as he had told the first wife.

These women put the loin-clothes on and went off to the farm with their husband. When they got



PLATE - XIV: The Man and Two Wives
16 Centimetre
Plastic (Isopon) 1988.

to the farm they started hoeing, the husband began to sing, saying - "quickly, quickly loin-cloth wearers", this spurred-them on to faster and harder work.

After a time the first wife's loin-cloth became uncomfortable and she pulled it off, and said "I cannot work with that on." When she had taken it off and she realised she was given the loin-cloth to make her work hard. Then she refused to wear it any longer. When the other wife heard this she realised she had been tricked too, so they both undid their loin-clothes and pulled them off. Then the husband replied, if I had not done that to you, you would not have worked so hard.

This marquette illustrated in Plate - XIV intends to recreate the character of the two wives discussed in the above folklore. The wives are tired and exhausted after working on the farm. They are dissappointed after discovering that their husband had played a trick on them. The reclining pose of the tired women has been recreated to potray their relaxing mood for the development of form for children's play activities.

The marquette was first modelled in clay for better manipulation of the form. The mould was then taken in plaster and cast in Isopon (plastic) The sculpture was later patinated. This marquette is about 16 centimetre, the actual work could be done using the direct method, with the media being cement. See Plate - XIV

4.2 OGEDENGBE'S DRUMMER

This play sculpture is a stylized African *drummer. Accessibility within this sculpture was* provided for by creating openings within the form. The spiral nature of the form enhances the form not only aesthetically by helping to carry the playing child's eyes round the sculpture. It could also serve in enlightening the child of the plastic arts - sculpture as an art.

This sculpture depicts the character of a famous drummer in the folklore story of Ogedengbe's Drummer. In the olden days especially during the era of constant inter-tribal wars amongst the Yorubas, a warrior hero called Ogedengbe lived in the city of Ilesha. Ogedengbe ruled Ilesha and was feared and respected because according to my sources Kaula (1968) it was said that once he enbarked upon



PLATE - XV: Ogedengbe's Drummer
20 Centimetre
Plastic Isopon, 1988.

horse and the dog the same, asking them to inform other friends. On the appointed day, all the animals gathered together in spider's farm, waiting for him but he did not turn up. Unknown to them spider hid in-between the leaves and began to yell so loudly that the animals got frightened and took plight in the process killing the small ones.

Spider later came out of hiding, seeing the animals lying about in great number. He called his wife and they took all the animals home and fed on their meat. At home the two of them ate and ate, until spider was strong again.

The marquette in plate-XVII attempts to represent the congregation of animals that honoured the spider's invitation - the elephant, the giraffe, the horse and the dog before the disaster. The waiting mood of the animals has been recreated and developed for children's play activities.

The material used for the marquette is black afara wood. The marquette is about 15 centimetre high. The actual work could be done using metal. The edges of the sculpture shall be rounded so that it will not constitute a danger to the playing child. See plate - XVII

war against a town or village he would not relent or retreat until he had accomplished his objectives.

The city of Ibadan was then ruled by another warrior Chief called Ogunmola. According to the story, Ogunmola decided that he would attack Ilesha and destroy Ogedengbe. The two armies met and the war continued for some days. Finally Ogedengbe defeated Ogunmola. As a result of this defeat, Ogedengbe was not satisfied. He became more angry than ever before. He decided to punish Benin for conspiring with Ibadan. As he rode his white horse his drummer went on ahead. His drum went thus: "Ogedengbe is coming, Ogunmola is finished. Now it is Benin's turn, Benin prepare yourself, prepare to bury your corpse."

When the sound of the drum was heard ahead, words of Ogedengbe's approach reached Benin. The Oba of Benin sent to Ogedengbe saying "Our people say there is no need to make war on Benin. The people know your courage and achievement" but Ogedengbe replied harshly, "hear my drum for it speaks the truth."

The Oba foresaw that the city would be destroyed so he called a meeting of elders. One

of them said "can Ogedengbe's drum say only one thing? What are drums afterall. They can say only what drummers make them say." The people said the drummer was dear to Ogedengbe because he paid him well. They could speak of Benin's greatness too, so they collected cowries from whoever had.

At night a messenger took the cowries to the drummer and said the people in the city had heard his drum and praised it. The people of Binin would like him to drum something for them. "Never has Benin been defeated. Never has Benin been walked on by enemies." They would like him to drum this before the battle began the following day. For this they would give him ten thousand cowries.

In the morning the drummer began to praise Benin instead of Ogedengbe at the battle front. Anger filled Ogedengbe and doubt came into him - it was true Benin had never fallen in war. His fury for battle softened and he returned to Ilesha.

The marquette in Plate-XV was derived from the folklore story above. It depicts Ogedengbe's controversial drummer, drumming vigorously to a achieve fame. This pose potrays the dynamism

with which the drummer drumed. The marquette was done first in clay, for easy manipulation of the form. The mould was taken in plaster of paris and cast in Isopon (plastic). The marquette was later partinated. The size of the marquette is 20 centimetre high. The direct cement method in sculpture could be used for the actual work. (see plate - XV)

4.3 THE FISH-ANIMAL

This is a play sculpture which could be used for climbing, jumping and crawling. It is an animal form, reminiscent of a cross breed between a fish and a mammal. The sculpture also depicts the main character in a folklore story.

Once upon a time, according to Edgar (1969) there was a fish which turned into a beautiful woman and came into a town in search of a man to marry. On arrival to town a man saw her and married her unknown to the man that she was a fish. One day she said to the man "my husband, I would like to go out of town to collect some medicine." Her husband therefore, gave her his permission to go on this mission. The fish made her way to the river bank and after looking left and right and seeing nobody in sight the fish threw its cloths



PLATE - XVI: The Fish Animal
15 Centimetre
Plastic (Isopon) 1988.

off and suddenly turned into a fish and a mammal cross-breed. She gathered together other animals and they played and played until evenings. In the evening she took up her clothes fastened it on, and returned home. The fish did not realise that while she was being transformed, her husband's friend was fishing along the river bank. He returned home and told his friend and they waited for her to come, when her husband asked her why she took so long she answered, 'I went to collect medicine but couldn't get any." Her husband was so annoyed that she told lies, so he beat her till her clothes fell off and she began to yell for help.

This marquette represented in plate - XVI attempts do depict the character of a woman who had the ability to change to a fish. The marquette portrays the woman in a changed form at the river bank. This has been used in developing a play form for children's play activities.

The marquette was modelled in clay. Moulds were taken in plaster of paris and cast in Isopon. This was done because clay could be manipulated easily to get the form.

The size of the marquette is about 15 centimetre high and the actual work will be about one metre. The direct modelling method could be used, with cement as the medium. (see plate - XVI)

4.4 THE BEAST OF THE BUSH

This is a composition consisting of the profile of four animal heads - the dog, horse, giraffe and elephant. These animals were chosen because of their unique and distinct features. The idea here is to help children identify animals while at play. It is also aimed at improving and challenging their ability in art, for example children could individually imagine how they would arrange their own small animal shapes aesthetically.

These animals also depict a Hausa folklore story, Edgar (1969) of the spider and other animals. One day spider fell ill, and was going to die of hunger. He said to his wife, "I have a craving for meat and I have a scheme that will work out fine if carried out properly."

He went and told the elephant and the giraffe that there was to be a gathering of all friends who will help with his work on his farm, he told the

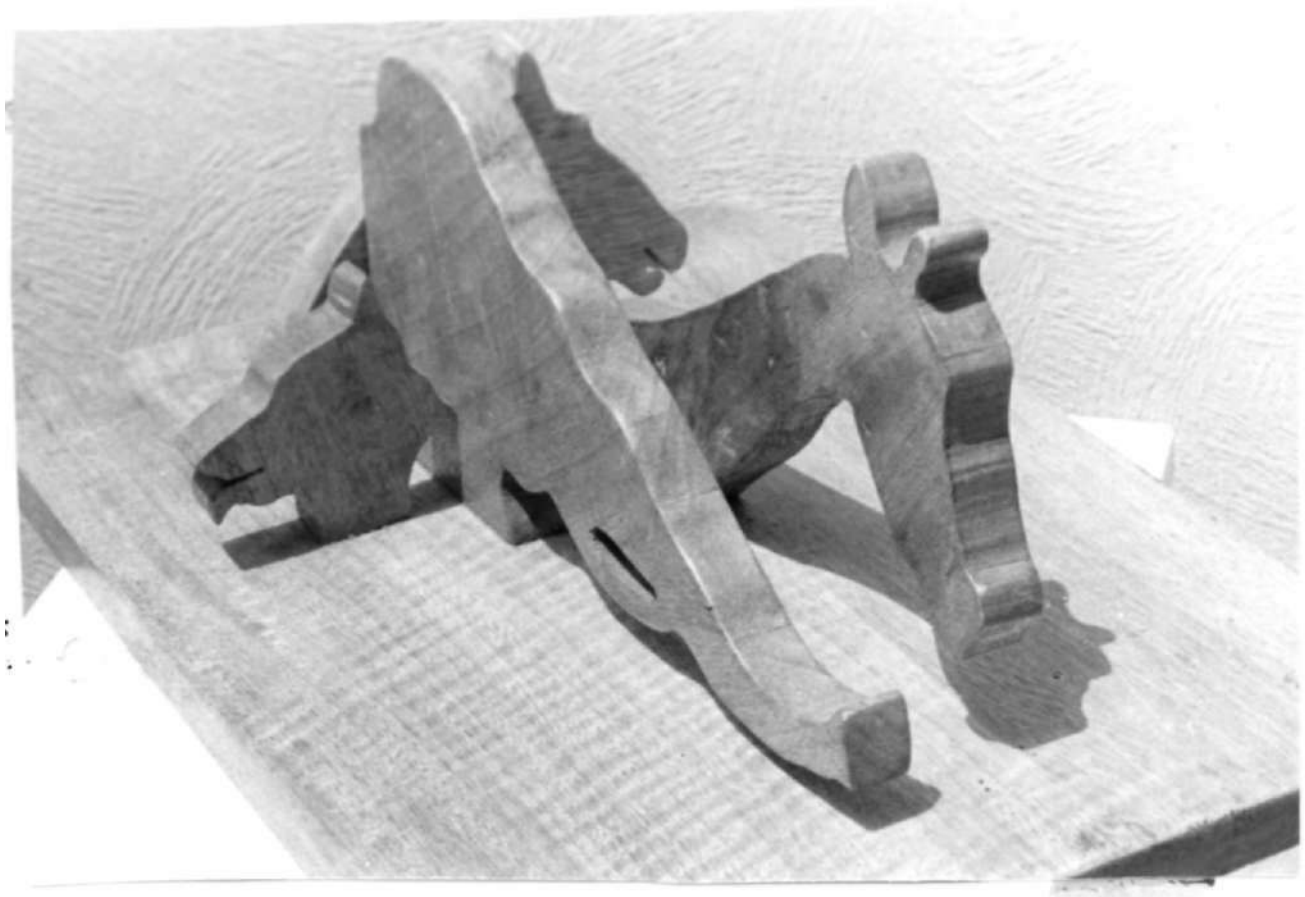


PLATE - XVII: The Beasts of the Bush
15 Centimetre
Wood, (1988).

4.5 THE LION AND THE WOMAN

This is a semi naturalistic form. The sculpture depicts a pregnant woman with a child on her back. The pose indicates that she is weighed down with some problems.

The form is modelled such that it includes a generous invasion of internal space. This is deliberate in order to enhance its aesthetics as well as give children ample space to pass through. This sculpture is also representative of the main character in the folklore story below.

There was once a woman who lived on a farm. Although she was the wife of a rich man who gave her fine clothes and jewels, she was not happy. Her husband neglected her, sometimes staying away from home for weeks at a time.

The woman consulted the village wise man asking him for charms that will bring her husband to her side and thus, end her loneliness. The wise man said, he could help her but she had to pluck three hairs from a living lion's mare. It seemed an impossible task but one morning she mustered up courage, picked up her favourite lamb and followed the path that led into the rivine. As soon as she

saw the fierce black maned lion she set the lamb down on the path and turned quickly and went home. Every morning at day break she went to the ravine, and the lion came to expect the daily visit. One day he approach her with his head high and tail wagging, the woman then knew that she had won lion's trust, and she decided to pluck three hairs from her friend's neck which she carried to the wise man. The woman told the wise man that by hiding her fears, using patience and understanding and affection she made the lion her friend. The wise man then advised her to use patience, affection and her wonderful understanding to win her husband." They are the charms I have to give you." Tremearne (1912).

The marquette illustrated in plate - XVIII attempts to depict the character of a rich man's wife, who was not happy because her husband neglected her. The non-challant reaching pose of this unhappy woman has been recreated to portray her depression for the development of form for children's play activities.

The marquette was first modelled in clay. A mould was then taken in plaster of paris and

the cast done in Isopon (plastic). This sculpture is 20 centimetre high.

The life work will be done using the direct modelling method. The medium for this could be cement. See plate - XVIII

4.6 KWESI BENEFO

This is a semi naturalistic sculpture in a reclining form. In this sculpture the head and the hand are positioned at the same point, to enhance the form. A character of a folklore story told by Kaula (1968) is represented in this sculpture.

Among the Asanti, a young man named Kwesi Benefo lived. His field flourished, he had many cattle but he lacked a wife to bear children for him, to care for his house-hold and to mourn his death. When the time came, he went looking in his village and found one who pleased him. They were happily married but soon the young woman died. He married three other wives one after the other but they all died.

One night he lay sleepless and the thought came to him that he should go to Asamando the land



PLATE - XVIII: The Lion and the Woman
20 Centimetre
Plastic (Isopon) 1988.

of the dead. He went but was not allowed to see his wives. After much debate and considering his misfortunes he was allowed to talk to them but could not see them because they were like air. They welcomed him, gave him food and a mat to rest on. They also sang to welcome him, praising him for being good to them. In their song they told him to continue living till his natural death and when the time comes they would be waiting for him. Meanwhile he was asked to marry again and this time his wife would not die.

Hearing these sweet words from the women he loved he fell into a deep sleep. When he woke up he was no longer in Asamando but in the forest. He went back to his village built a new house, cultivated his farm and interacted with people. Later he found a wife, had children and they lived happily.

The marquette illustrated in plate - XIX depicts the character of the man called Kwesi Benefo, sleeping in the forest, after his trip to Asamando land. The reclining restive pose of Kwesi Benefo has been adapted for the development of a form suitable for children's play activities.



PLATE - XIX: Kwesi Benefo
10 Centimetre
Bronze

The marquette was first done in clay for easy modelling and manipulation. The second marquette was cast in brass using lost wax method. The sculpture was then filled to give it a smooth finish. The marquette is about 10 centimetre high. See plate - XIX.

The actual work could be done in cement using the direct modelling method.

4.7 THE GIANT FOOT

This is a play sculpture based on the concept of a human leg, stylized. See figure 1. Viewing this sculpture from one side the leg is represented naturalistically and from the other side it is a leg represented in planes as in figures 1 and 2 respectively. It consists of two slides, one for smaller children and the other for older ones, creating room for many children to play at the same time. Two sets of steps serve the lower slide while the third one serves the upper slide. This sculpture is suitable for climbing, sliding, crawling, hide and seek and sitting. The sculpture is about 350 centimetre high on a 60 centimetre foundation.

LEFT VIEW

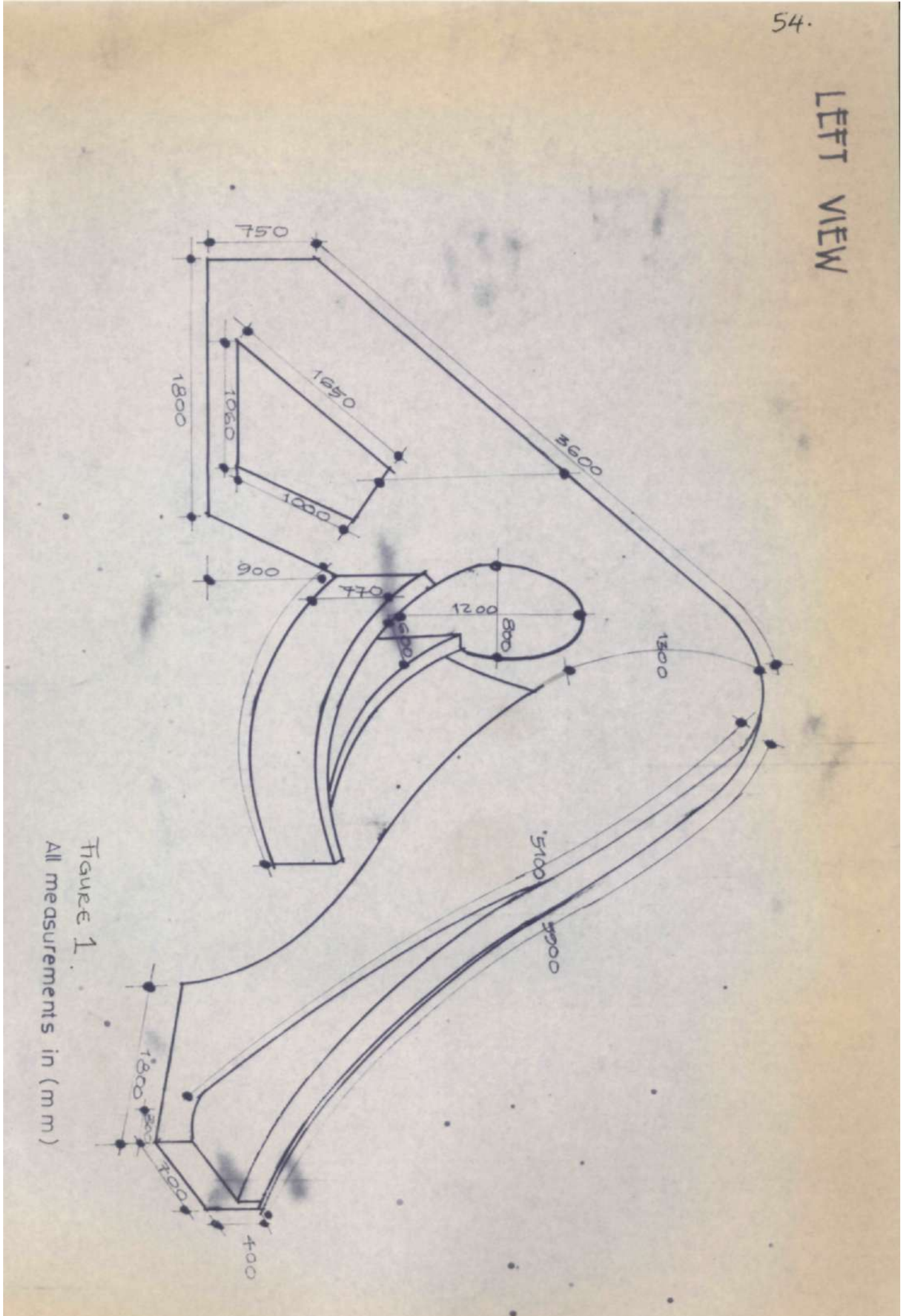


Figure 1.

All measurements in (mm)

RIGHT VIEW

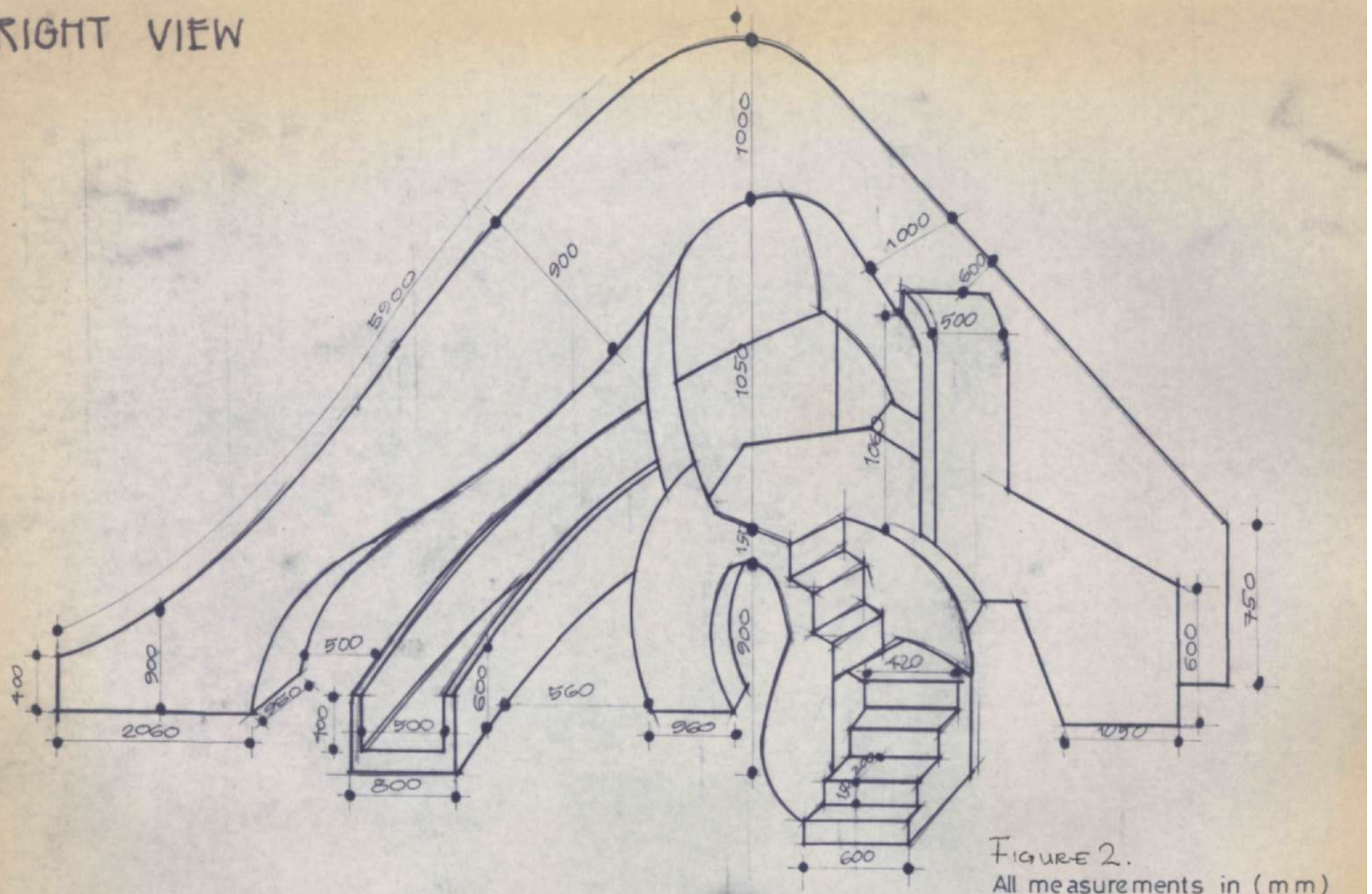


FIGURE 2.
All measurements in (mm)

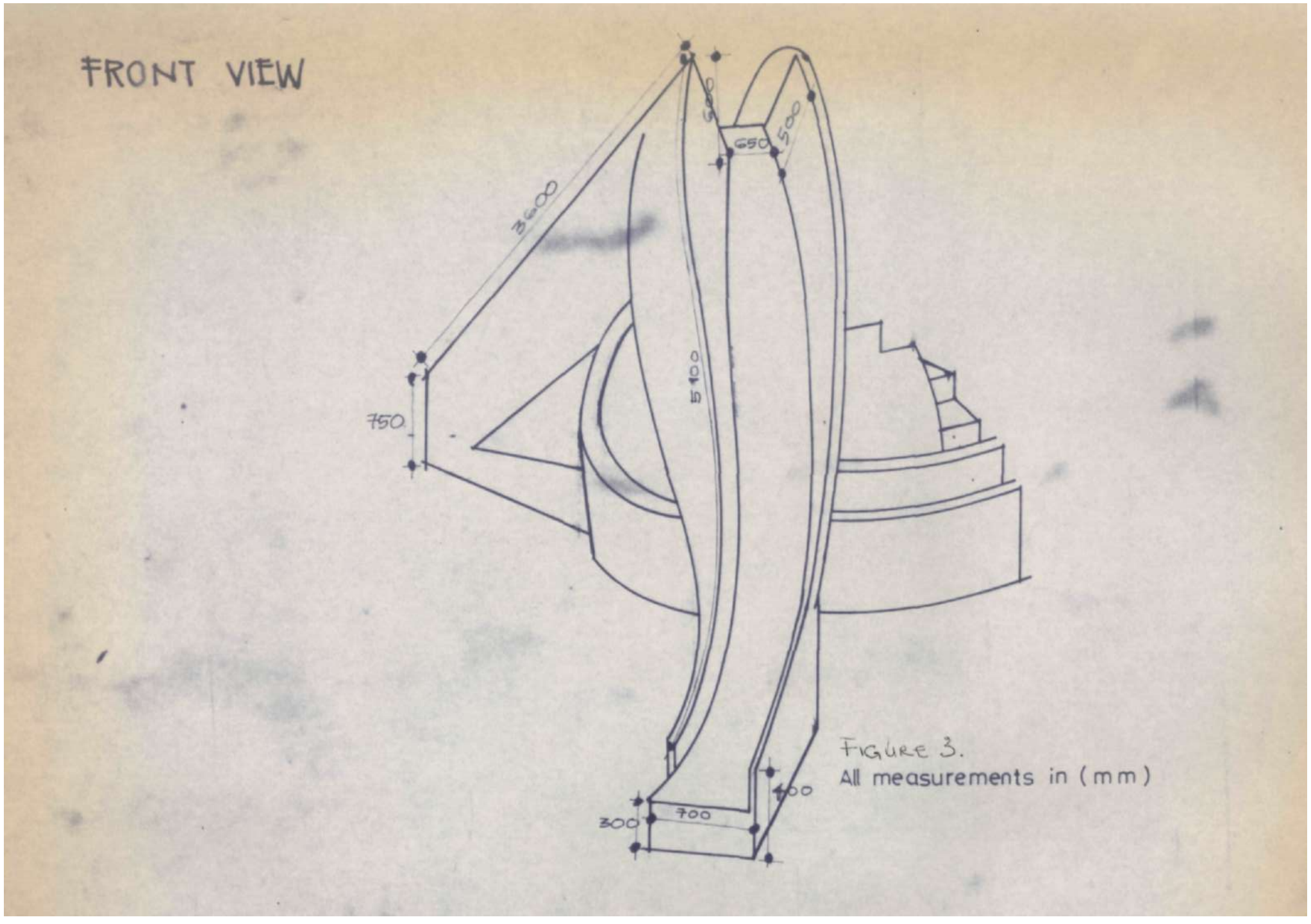


FIGURE 3.
All measurements in (mm)

BACK VIEW

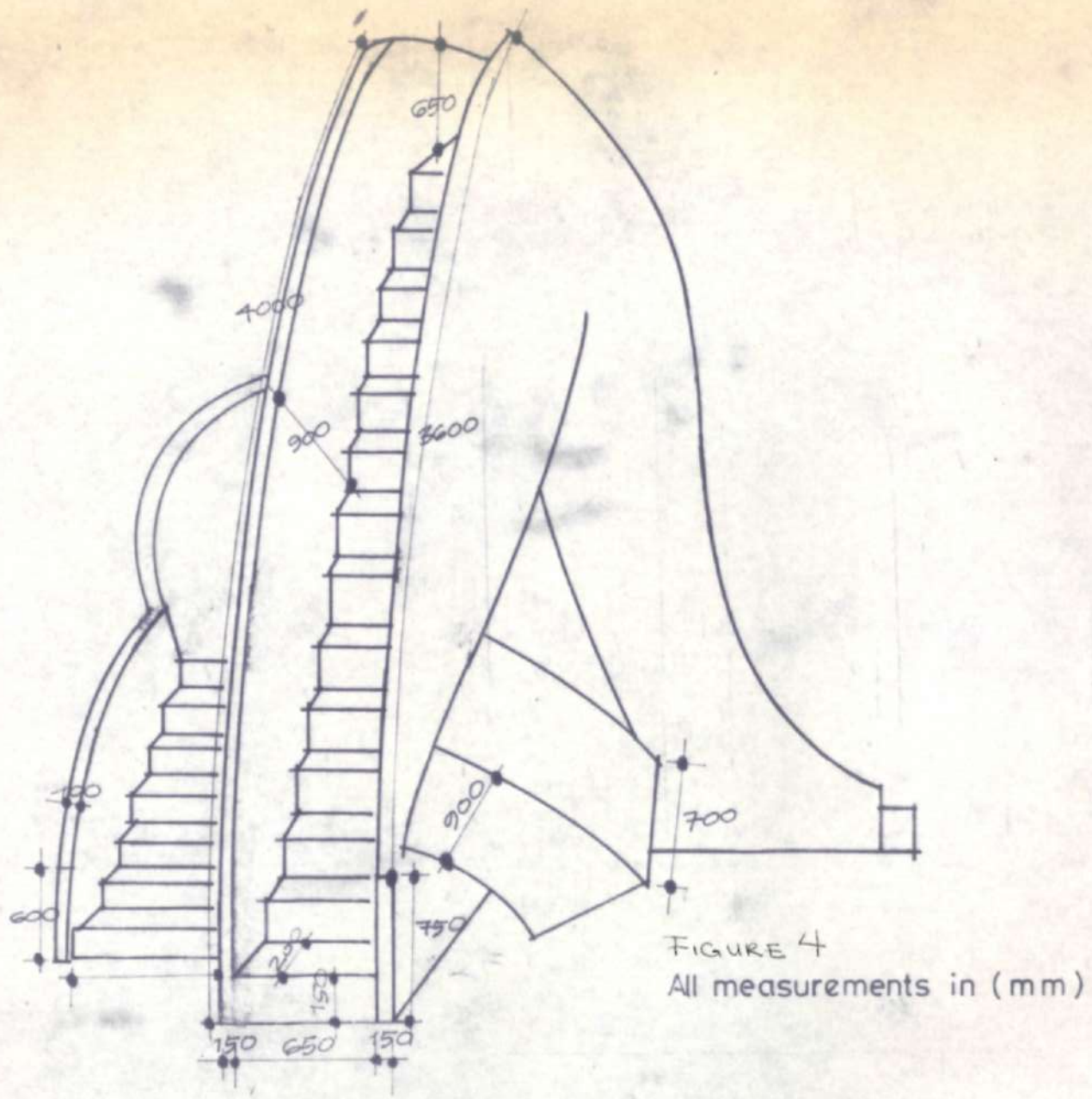


FIGURE 4
All measurements in (mm)

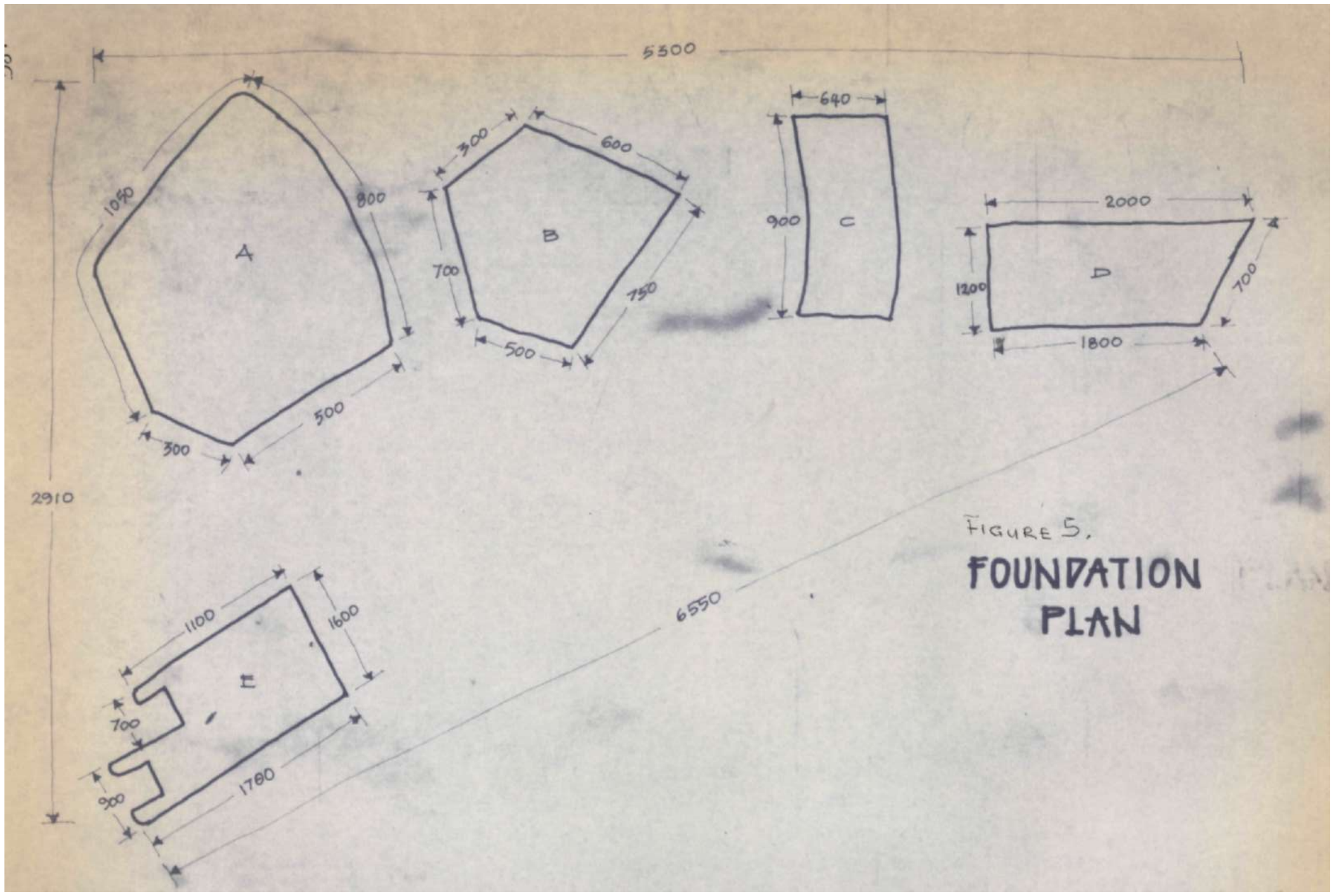
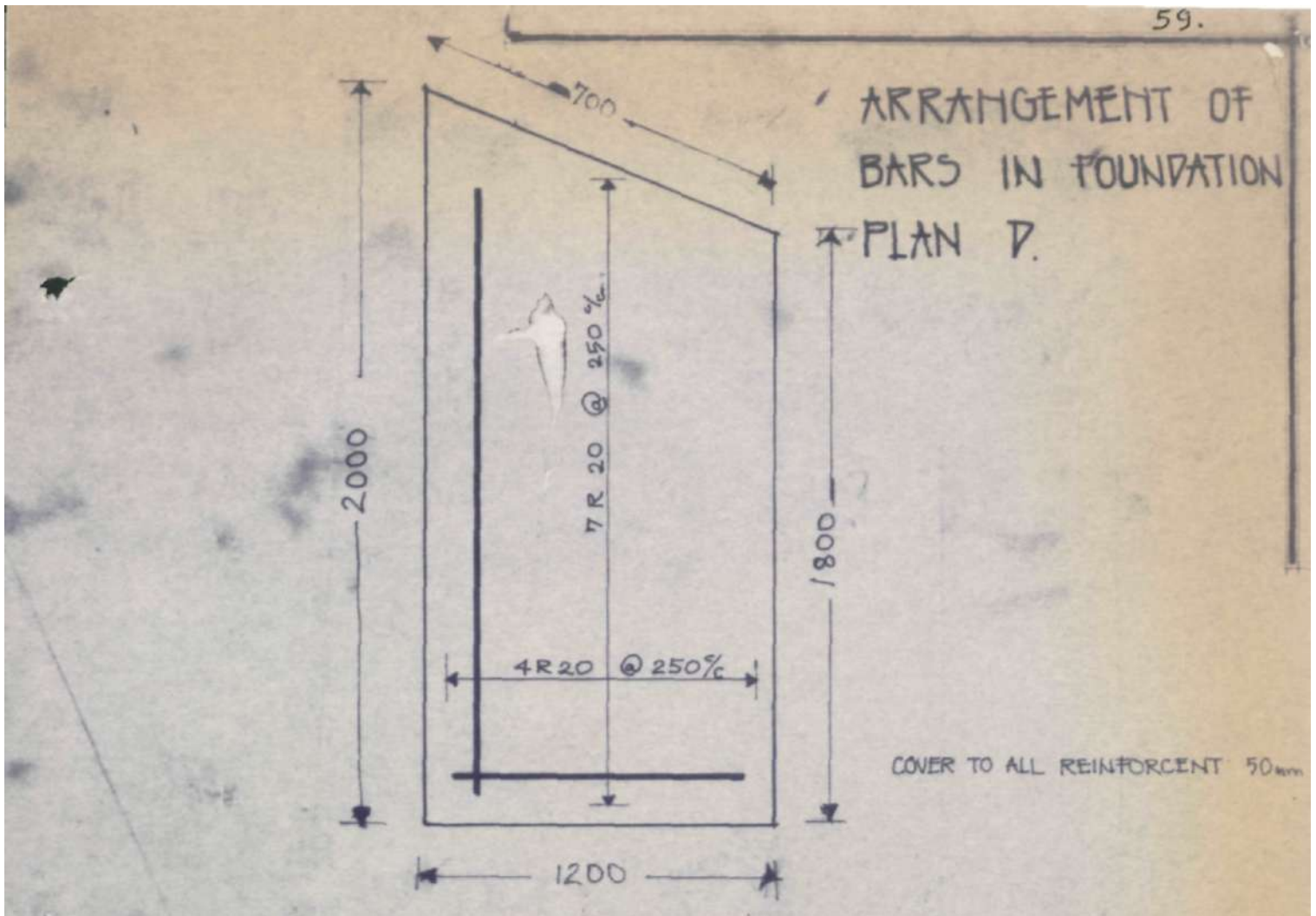


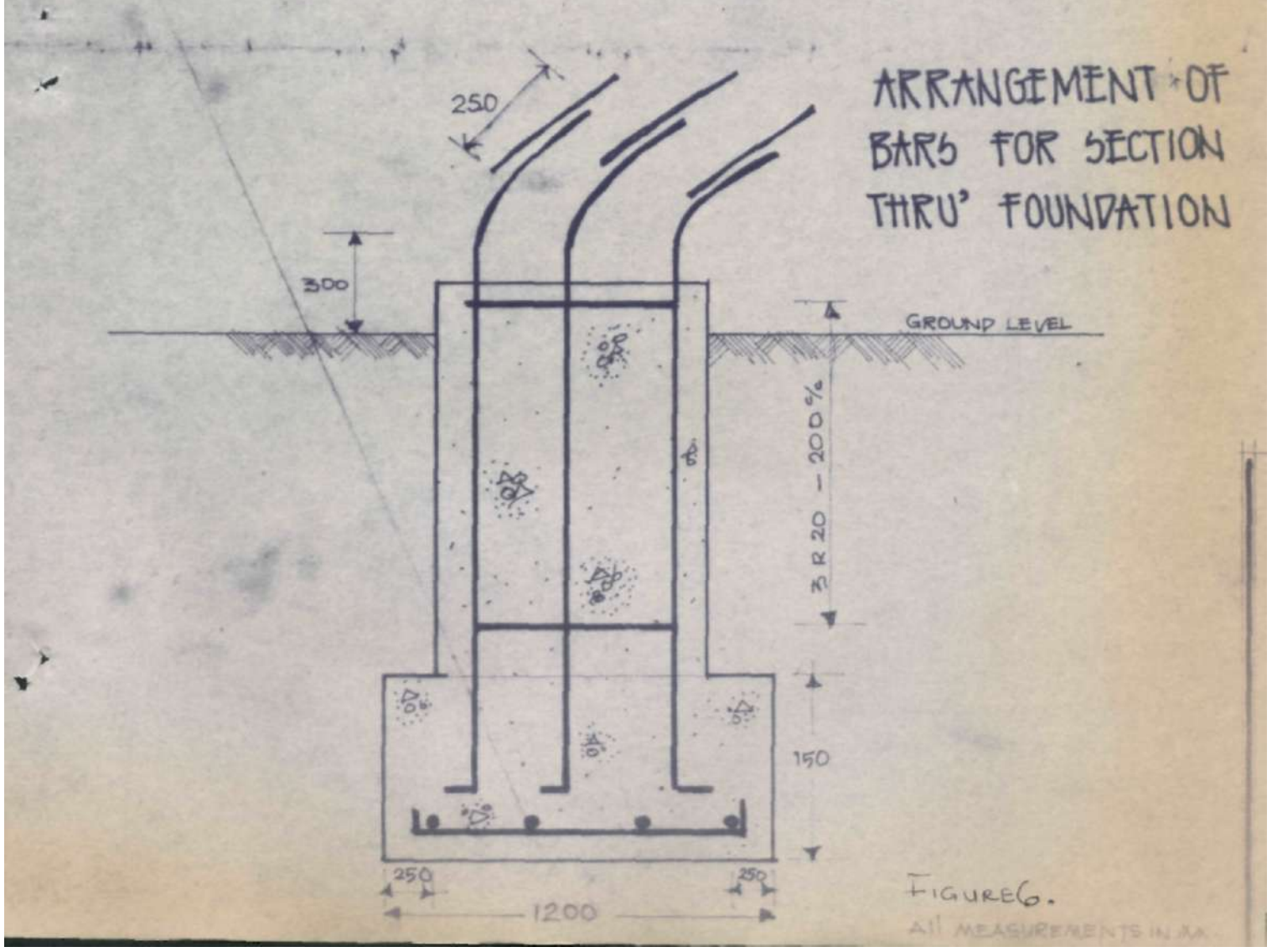
FIGURE 5.

FOUNDATION PLAN



ARRANGEMENT OF BARS IN FOUNDATION PLAN D.

COVER TO ALL REINFORCENT 50mm

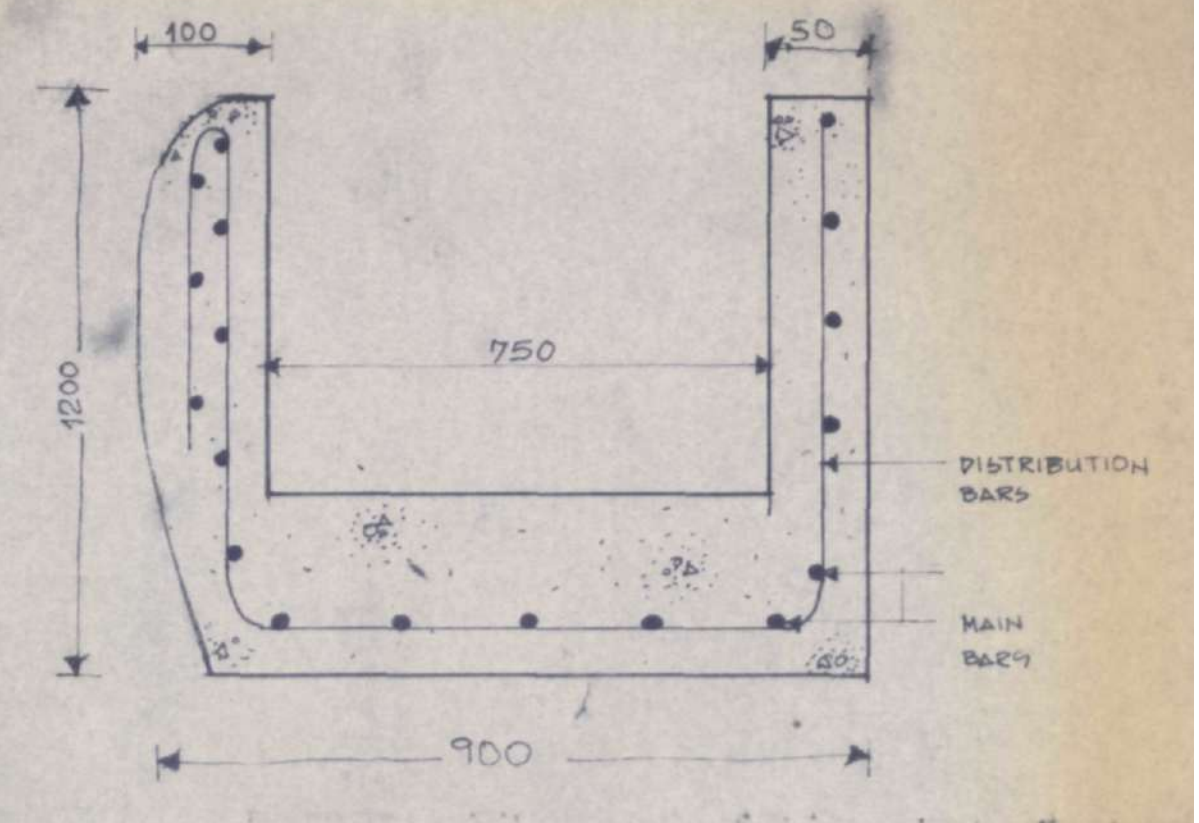


ARRANGEMENT OF BARS FOR SECTION THRU' FOUNDATION

FIGURE 6.

All MEASUREMENTS IN MM

SECTION SHOWING THE ARRANGEMENT OF BARS IN UPPER SLIDE



SECTION OF CONCRETE FOUNDATION

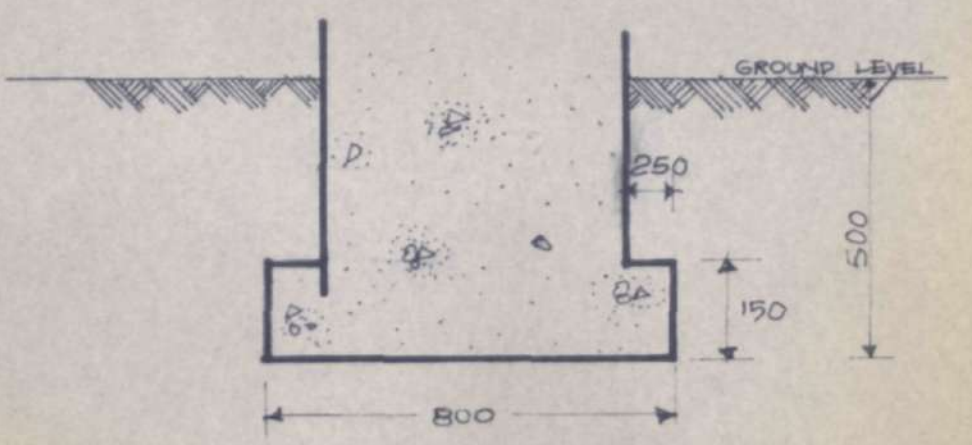


FIGURE 7.
ALL MEASUREMENTS IN MM

This sculpture is symbolic of a folklore story of the Ora people of Bendel State. There is a popular belief that there was a giant that lived in that area a long time ago. Whenever neighbouring people threatened to waged wars against the inhabitants this giant always came to their aid by single handedly fighting the war for Ora people.

When he was going he left a mark of his foot for the people to remember. A sign for the people to remember him as a saviour.

The marquette in plate - XX was derived from the story as narrated above. The massiveness of th the Giant's Foot is assumed to depict how huge the giant was. The provision made to accomodate, children could also be associated with the protective nature of the giant.

A marquette was first designed then modified to include a curved lower slide and a small stair case by the big stair case. The marquette was first modelled in clay for easy manipulation of the design. The mould was taken in plaster and cast in Isopon. The marquette which was 30 centimetre was blown up to scale 1:10 for the actual work with some modifications.



PLATE - XX: Giant Foot Marquette
30 Centimetre
Isopon

Working drawings for the foundation and scaled drawings were made as in figures 5 and 6 respectively. The play sculpture was finally realised using reinforced concrete.

A suitable site in the Ahmadu Bello University Staff School, Zaria was chosen. On the site the positioning of the footing at five points (as in figure 5)was marked out, then the foundation was dug. For the foundation 300 millimetre of top soil of the footing was removed because of organic matters that could be injurious to the concrete. The foundation was further dug 300 millimetre deeper, to reach a suitable bearing strata with required ground pressure. Although a depth of 600 millimetre below ground level was dug. The soil was removed and the base blind and ramped to recieve fresh concrete.

Mild steel bars of 20 diametre were placed at 250 millimetre centre to centre in both directions. These bars were placed horizontally in the foundation and lifted up slightly with small stones called biscuit. A wooden form-work was placed around the edge of the form-work, then the starter bars were placed in position vertically. The starters which were space 150 millimetre centre to centre were



PLATE - XXI: Giant Foot Construction



PLATE - XXII: Giant Foot Construction
350 Centimetre
(Form Work of Steps)

projecting 300 millimetre above ground level to form the lap length. (see figure 6).

Concrete mix of 1:2:4 (cement:sand:ground) was poured on the foundation to a height of 150 millimetre and properly ramped (vibrated). Another fresh layer of concrete of 150 millimetre was poured on the former and ramped properly. The concrete was watered once a day for proper curing for 7 days.

Wooden form-work made of white wood was erected in position, supported by props. The form-work was erected according to the working drawing. Mild steel reinforcement of 16 diametre were placed in position at a distance of 150 milli metre centre to centre in the form work to resist bending moments. 12 diametre mild distribution steel bars were placed 200 millimetre centre to centre. The main bars were introduced to resist bending at the tensile zone of section, while the distribution bars distribute the load to avoid over-stressing. Hence, both work hand in hand to avoid total or partial collapse, deflection, shrinkage and cracking.

In each case a concrete cover of 50 millimetre was allowed to prevent rusting of the bars. Fresh of this same mix was poured into the form work and ramped to expel air voids.

For maximum strength of the concrete the form work was allowed to stay in place for 28 days to acquire the maximum strength specified by building call of practice. Before plastering the concrete was watered to improve the bonding between the mortar and concrete. Cement and fine sand of ratio 1:3 was used to plastering the sculpture and watered at intervals to avoid cracking. All these were done to meet the standard in the building industry.

A metal hand rail for the lower stair case, on the right was designed. Considering the movement (down-ward) of the form. The hand rail was done in metal to allow light into the form and create a variety (metal/concrete). The hand rail was then painted red, to complement the colour of the main sculpture.

The sculpture was painted, first with white wash (lime coating) then with golden yellow to attract children. The floor of the slide was given a fine, smooth finish using cement screed but not



PLATE - XXIII: Giant Foot Front View
350 Centimetre



PLATE - XXIV: Giant Foot Side View
350 Centimetre

painted. A circle was then made around the sculpture using blocks. Fine sand was poured into the circle to serve as a sand-pit for children aesthetics and safety around the sculpture and painted yellow too.

4.8 WOOD CONSTRUCTION - I (Children's Theatre)

This is a wood construction with a massive out-look. A section of it is graduated in forms of a stairway for climbing. Deep cuts are made into the design to allow such activities as hide and seek, running, climbing or peeping.

The marquette was constructed by assembling a series of appropriately shaped mahogany wood pieces. Wood was chosen as the media because it seemed most suitable for the regular shapes required, the edges were also rounded. The marquette was polished with "wood finish", and it is about 13 centimetre high. The actual work could be done in cast concrete. (see plate - XXV).

4.9 WOOD CONSTRUCTION - II

This play sculpture is the researcher's hypothetical idea which has been realized using geometrically shaped wooden pieces. The use of

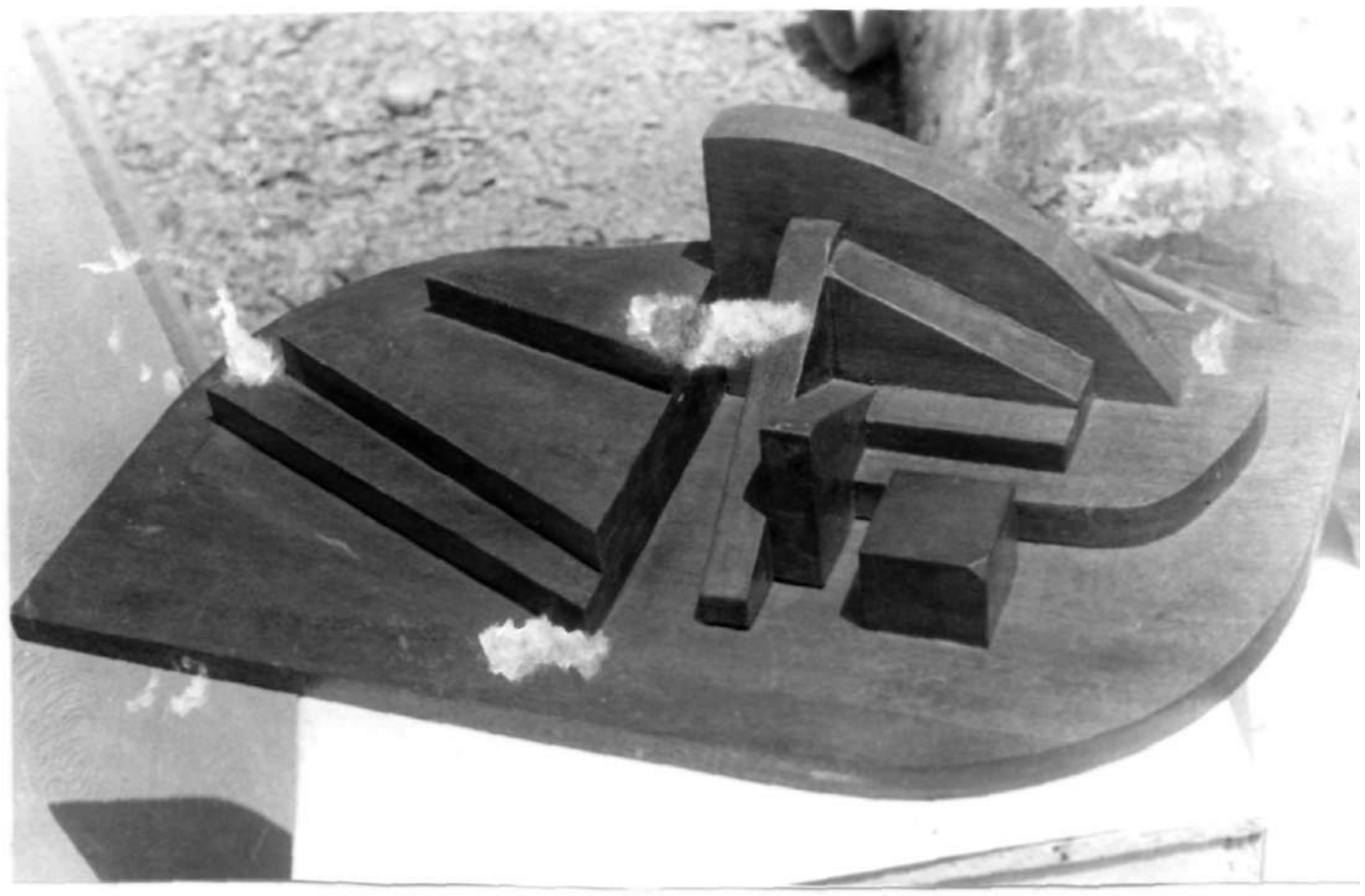


PLATE - XXV: Wood Construction - I
13 Centimetre
Wood

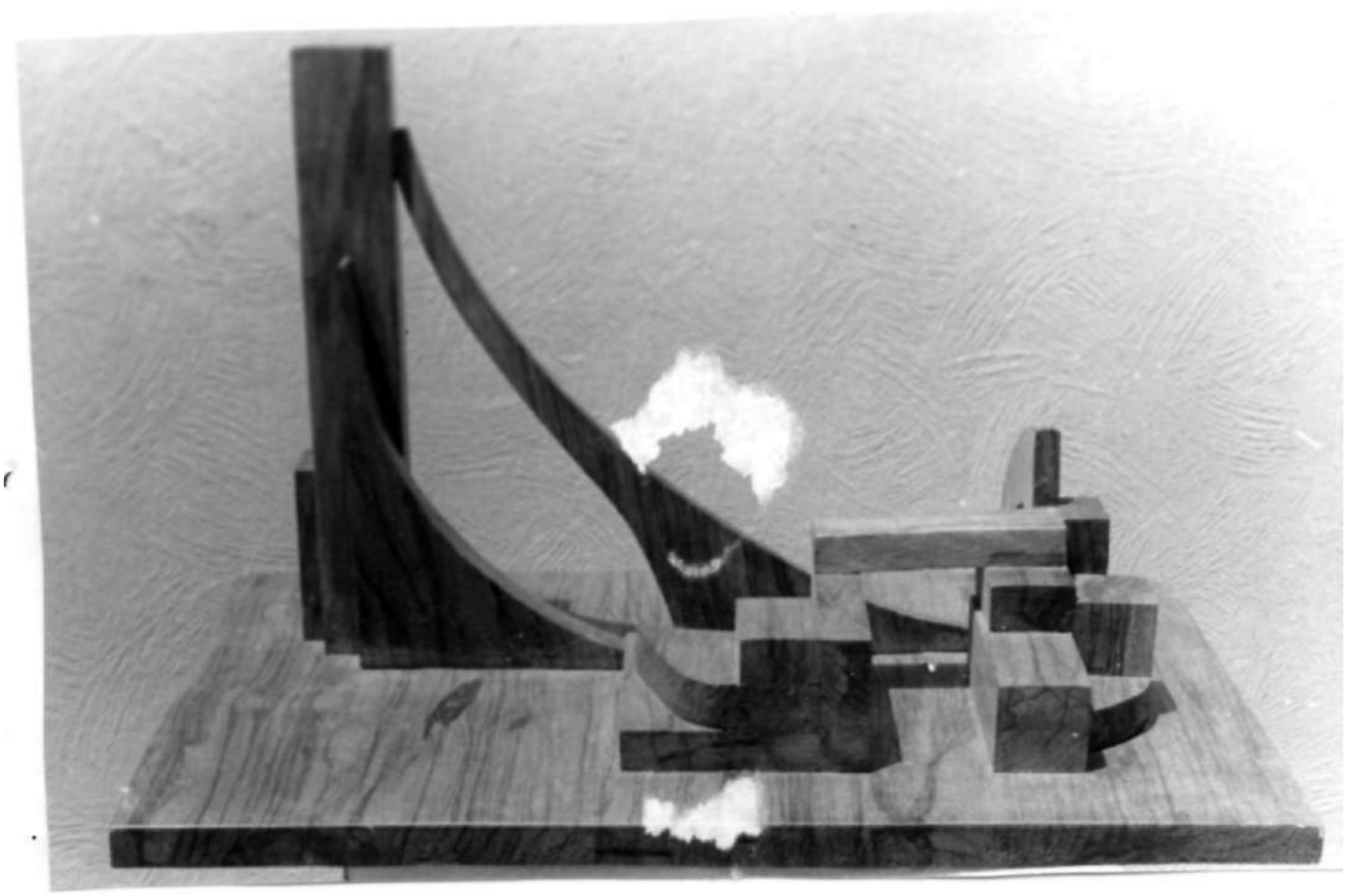


PLATE - XXVI: Wood Construction - II
30 Centimetre
Wood

shapes has a bearing on African motifs especially the Hausa motifs which are basic shapes. The sculpture was designed with a lot of space within and around for easy movement. It could be suitable for a park or any spacious location where children are commonly found.

The marquette about 30 centimetre high was designed using black afara (wood). The shapes were cut, sanded and joined together with screws and ponal glue to allow for play activities chosen by the child. Wood was chosen as the medium because it enhanced easy achievement of regular shapes required. The actual work could be done in the cast concrete. (see plate- XXVI).

CHAPTER - FIVE

RESEARCH FINDINGS

The determination of the effectiveness of the play equipment for children was based on the observational guide as contained in Appendix - 1. In determining the children's reaction to 'Giant Foot' play sculpture, the following proceedures were undertaken. The observational guide was used directly by the researcher from a safe distance in watching while children played. The opinion of various teachers in the Staff School concerning the children's reaction to the play sculpture were sampled and used comparatively with the findings of the researcher's observation of children playing on the sculpture.

In the findings, it was discovered that the teachers opinion (table 1) were of a similar pattern as those observations made seperately by the researcher (table 2). The thrust of both results is that not less than 95 Per cent of the children were keen about playing on the play sculpture.

Our of two hundred and forty pupils observed two hundred and twenty nine were very interested because

they played within the sculpture most of the time. Six were interested because they played in and out of the sculpture and none was indiffernnt because they stayed around the sculpture, but did not participate. Four were not very interested because they moved to other forms more than the sculpture while one was not interested, because he play with other forms without moving close to the sculpture (table 1).

Generally, most of the children were intrigued by the sculpture. The reason is not far-fetched. It was an unfamiliar experience to play in a sculpted form. That apart, the broad out-look of the form reminiscent of a giant foot seemed to taunt their sensibilities. For example, one wing, the gentle flight of stairs, gives the impression of one boarding a plane. On the other wing, a feeling of a straight-standing gigantic elephant which takes one up in the air is induced.

In table 2, out of the two hundred and forty pupils observed, two hundred and thirty pupils were very interested, because they played within the sculpture most of the time. Three were interested, because they played in and out of the sculpture, five indifferent, because they stayed around the sculpture but did not participate. One was not very interested, because he

TABLE - 1: Frequencies of Groups

Groups		No.	Percentage
A	Very Interested	229	95.4
B	Interested	6	2.5
C	Indifferent	0	—
D	Not Very Interested	4	1.7
E	Not Interested	1	.4
	Total =	240	100

TABLE - 2: Frequencies of Group

Groups		No.	Percentage
A	Very Interested	230	95.8
B	Interested	3	1.3
C	Indifferent	5	2.1
D	Not Very Interested	1	.4
E	Not Interested	1	.4
	Total =	240	100

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moved around other play forms more than the sculpture, while one was not interested, because he played with other forms without moving close to the sculpture at all.

The percentage of the very interested group is 96. The very interested group has a larger percentage by interest, therefore, the play sculpture is significant.

These experiences are undoubtedly exhilarating to a playing child. A child can climb, jump, slide, or even play hide and seek. Most importantly, the child can enlarge these experiences to such illusions as boarding a plane, experiencing the sight of a giant whose foot they can walk into or even ascending a mysterious building. This seems more exciting to children than the everyday seesaws, slides, swings, and structures they are familiar with.

It was noticed that children from the surrounding villages - Samaru and Jama'a were not less interested in the sculpture than the children at the Staff School. This is due to the definite way in which the various facilities provided were laid out. It was easy for them to identify them and to use accordingly even for the first time.

While the sculpture was being constructed children made guesses at what it looked like - some thought the foundation were graves while others thought they were wells. Other children who saw the marquette were anxious to see the work finished so that they could

play on it. The older children felt they were too old for this while it was being constructed. However, the reverse was the case, when a study was conducted to see their reaction. They made the best use of the time spent on the sculpture. It was also observed that most of the children (young and old) especially the girls were scared of sliding down the slide because of the height, but after the first slide down they became confident.

On the slide itself, children seemed to be more endeared to the bigger of the two slides as in Plate - This is perhaps because it provides a longer slide and consequently longer excitment. Even so, a few children were apprehensive about sliding down a concrete surface on their shorts, understandably so, particularly on a new concrete surface.

The options - wood or metal - were preponderated but were passed over on this premise; permanence wood tends to rot in out-door conditions. Metal plates tend to be incised in rough conditions of children's play after a while.

The open out-look of the sculpture enhanced the effectiveness of the sculpture. It allowed for repeated usage of a facility without recourse to going round the

sculpture without the rush and shoving - aside that attends to such situations. However, to achieve this some aspects of the marquette had to be modified. For example, the head had to be eliminated for easy mobility while the mass under the stair case was reduced, which further enhanced the design and reduced mass.

The researcher observed that such structures should avoid sharp edges as much as possible. It should also be a solid structure that will not limit the number of children climbing because of their weight.

The use of colour is very meaningful in designing for children. Colour represents different cultures, it has different symbolic meaning. For example, in early christian paintings white symbolised purity, faith and light while black suggests mourning wickedness and death.

For children colour tends to be used to express different moods and needs. For pre-school children red seems to be the most attractive colour while for primary school children, red-yellow-orange seem to be the dominant colours. A child who is happy tends to use yellow. Red is used to express love or aggression. Green depicts a lack of strong underlying emotion while blue could imply a very strong underlying emotion which they have redirected. Black seems to be a favourite colour for

use by children with intense anxiety or fear. Golden yellow (orange-like) which is the colour of the sculpture at the Staff School tends to be used by children who show sympathy and friendliness, it also gives an impression of fantasy and imaginative pursuit. This colour seems to give the sculpture the strength and is suitable for both boys and girls unlike blue which has been observed to be the boys' colour while red is for girls.

It was also discovered that a sand-filled pit around most if not all play sculptures is essential. Before sand filling the pot holes around the sculpture the whole area was water logged and very slippery, a condition that could cause accidents. The sand pit in addition to filling pot holes enhances the work and serves as a pad-like surface for landing.

The process of making the sculpture itself was an enlightening experience to both the public and the sculptor. Apart from getting to know the intricacies of constructing the sculpture, the project became some sort of a community scheme in which art was related to in "everyday" mundane problem in which passers-by were enthusiastic, as indirect participants.

CHAPTER - SIX

INTERPRETATION OF FINDINGS

"Man with the capacity of creativeness can transform material factors and re-shape goals bringing visions to reality," Turner (1952).

This research has observed that sculpture can go a long way in occupying a child and educating him at the same time. For the child experiencing stress under the rigours of growing up in the confines of a school, visual art could serve as a form of release. Dewey (1934) contends that art could, if used intellectually, contribute to the mental health of the child by giving him an opportunity to alleviate those tensions and communicate those meanings he could not articulate in discoursive language.

Since the environment is not always friendly, it does not automatically meet the needs of the inhabitants. There is therefore, a need to first come to terms with it, then subsequently control or adjust it depending on which is required.

The constructivists theory state that space and time are the only forms on which life is built, hence,

life must be constructed. Also they emphasise self expression, originality and creativity in art. Through this creation a representation of ones per eption of today is expressed. The writer's sculptures borrowing a leaf from above have been developed to give children an insight into things that have passed, the researcher's perception of today is also expressed. Also children become aware of development around them today - culturally, socially and otherwise. Art has been defined as that form of human endeavour which man purposefully interprets and which enhances the quality or essence of his experience through the things he creates. Therefore, art develops and leads to aesthetic and cultural growth.

Play sculptures also contribute to the environment. The child's play sculptures could perform a communicative role of espressing art historically and cross-culturally. This helps a child outside of printed pages to understand his own attitudes, values, beliefs and costumes, which have evolved from the past. For example what we know from pre-historic man is known from pre-historic art. Therefore, transition of culture from generation to generation is enhanced through the appropriately designed sculptures for the child's comprehension.

Art forms help to enhance the quality of peoples experiences. Through a child's participation in play activities in a play sculpture, a child begins to take a second look at the form. Part of the form begins to make some other meanings to him, probably because of the space or the sculpture's massiveness or even the themes or the sculpture. He relates these experiences to his culture, hence he begins to comprehend and appreciate the art of his society.

Also through play sculptures a child develops further the ability to give an aesthetic judgement. It helps him to appreciate good forms, perceive good rhythm and harmony the use of colour articulately and the instinct to make things shapely and efficiently is consequently developed - these are normal human characteristics (innate rather than acquired) certainly present in children from their earliest age. The ability to recognize these aesthetic qualities reside in components of any organisation and may help a child to know the difference between the good looking and the ugly, and what might be done to improve it. In this rein, play sculptures could help children to develop a mode of self expression through the making of their own art works. Consequently, art seen in this perspective

might serve as a veritable means through which the teacher or even the larger society might better read the child.

Plato advanced his theory that both the child and the environment are important in learning. The philosopic view of America tends to accept the environment as being the most important influence in an individual's life. Howeyer, Europe believes in an in-born class distinction and the merit of a highly stratified and relatively immobile social class. John Locke on his own part was of a philosophic principle which saw man as a product of his environment; man in a sense was what he experienced. He felt a society built upon the ideals of opportunity would be one where no man would be condemned to a menial position in life merely because of his station at birth. The researcher is of the school of thought which advocates for an enhancement of the child's environment because the child is a product of his environment. If a child's environment is rich in experience, for example, through this play facilities he would understand life better and relate his play experience to the larger society.

It is imperative from the foregoing that a co-operative effort is needed between artists (sculptors)

architects, town planners and engineers. There is a need particularly for architects to leave ample space for children's play in parks, hotels and other housing designs - space where they will work co-operatively with artists to furnish. This will enhance learning and creativity in children. Creativeness whether it operates on trial and error, reason, emotions, sensitivity, sympathy intuition or spiritual aspiration is the central part of history.

CHAPTER - SEVEN

C O N C L U S I O N S

Each sculptor is unique in his expression. If more sculptors design play sculptures then the child's play would be a world of fantasy, imagination, excitement, challenges, wondering and creativity all bundled up as he get exposed to the wealth of various sculptural ideas and imaginations represented concretely. Thus, the child is also able to learn about life's experiences relating these sculptures and his experiences to the larger society.

There is a need to develop more play sculptures that would challenge each child uniquely instead of play structures that have been over-used. Even if these structures would be used they should be developed further such that they become more fascinating and encompass more activities. The various theoretical or philosophical approaches are avenues to be explored to create a variety of concepts for interesting play sculptures.

Child psychologists, educators and the society at large can best see and understand the child's changing needs in a rapidly changing society. The sculptor could

further create a forum through which child psychologists and educators can further observed the child getting more acquainted with his problems and how they can be solved. Play sculpture could make invaluable contributions to solving societal problems.

Incorporating African stories into a child's play sculpture will no doubt help in taking the child back to his cultural heritage (he imagines the folktale setting). The child also begins to appreciate culture along side modern innovations. Like oral traditions, the sculpture remains parmanent and carries on the message from generation. The child's imagination is also broadened, such that he can relate this unique experiences to other spheres of his daily life. These play sculptures could also serve as concrete examples for teachers while putting some related points through to the child. Hence folklore stories could be useful in educating the child unconsciously.

One can only hope the non-challant attitude of parents to sculpture would stop with the proliferation of more play sculptures in schools, gardens, parks, and other necessary places. Through parents' interaction with the researcher, parents realised the relevance of sculpture to children's play and how they can learn.

Thus, it is hoped that this will help them appreciate sculptures generally. The location of the sculpture Giant Foot was such that it made an impression on the school aesthetically in terms of the form and its colour. The colour and the massiveness tends to invite viewers to take a closer look. The colour of such sculptures must have attractive colour for the child.

Vieweing the child's reaction to the play sculpture, the Giant Foot, the writer observed that children were fascinated by the form which seems unusual - a human let they could play on. The internal space within the sculpture, the curves, the stair case, the height and massive nature of the sculpture facinates the child. On the whole, the uniqueness of the sculpture has really been of interest to the child. Ventures like this aid the child in developing interest and skill in the plastic art. He begins to imitate and create his own forms and experes his inner feelings and desires.

It is therefore, necessary that places where the child is most commonly found is equipped with play sculptures. For example places like schools, parks, estates apartment buildings and hotels seem incomplete without these social educative facilities for the child. Architects and planners (urban and rural) need to give

play sculpture a consideration while designing buildings and planning for settlements.

The problem of the high cost of erecting play sculptures, could be solved by raising funds through proprietors, schools organisations, voluntary agencies and communities could also come together and contribute towards the up-keep and development of the children's play sculptures. The goyernment on the local or national level could also contribute towards this by budgeting for children's parks and other recreational facilities that are aesthetically pleasing and challenging.

There is a need for seminars and symposia to be held on this topic to educate the larger society on the importance of play sculptures. Such could serve as a forum where artists could discuss, and formulate concepts on how to develop forms for play.

Play sculptures at the design stage need to consider the heterogenity of the society. For example while the constructivist approach (constructions) is suitable for some places others might prefer the modelling approach (representational). If these suggestion are effected the child's play life would be more interesting and improved.

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APPENDIX - I

Guidelines for Teachers/Researcher

- The exercise shall take between 40 - 45 minutes.
- The children shall be allowed to play freely with the sculpture and other forms around.
- The teacher watches children without the children being conscious of it.
- After 10 - 20 minutes of playing the teacher begins to score each child into the groups below based on their interaction with the play items.

(a) Very Interested - played within the sculpture most of the time.

(b) Interested - played in and out of the sculpture (spent some time sculpture and moved to other forms).

(c) Indifferent - stayed around the sculpture but did not participate.

(d) Not Very Interested - moved around other play forms more than the sculpture.

(e) Not Interested - play with other forms without moving close to the sculpture at all.