

K. J. BUTLER

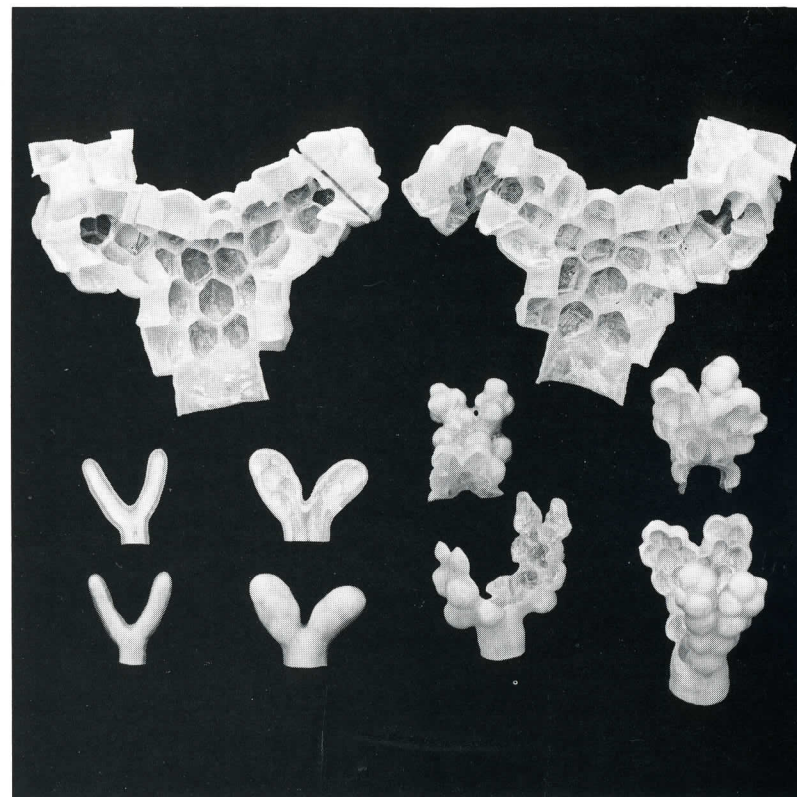
ART/SCIENCE TABLES

K. J. BUTLER

ART/SCIENCE TABLES

March 21-April 7, 1983

**GALLERY 111
School of Art
University of Manitoba
Winnipeg, Manitoba**



R. Mathieson Photo

Morphogenesis of the Terminal Acinus of the Fetal Lung; acrylic models, 1981.

Illustration page 1.

Five models describe the development of the microscopically small tips of the branches of the lung, through embryonic and fetal stages of growth up to birth.

Underlying the building of these models was the necessity to reconcile two structural paradigms essential to the growth and function of the lungs. 1) The tree-branching nature of the airways allows air to travel to the furthest tips of the branches and also permits the number of airways to increase from very few in the young embryo to countless generations of branches in the lungs of the young child. 2) The lungs must provide the maximum amount of tissue surface for transpiration in the tightly confined volume of the chest.

The anatomical structures that accommodate both functions of the lungs are the multifaceted, open-ended pouches called alveolae. The number of alveolae per terminal acinus, their specific structure and means of intercommunication, represent new conclusions about lung development that I have been able to explore and then demonstrate by building these models.

The Art/Science Tables and the Metaphoric Presence

I saw for a blazing moment
The great grassy world from both sides,
Man and beast in the round of their need . . .
James Dickey, "The Sheep Child".

I

Metaphor is about synthesis: things aren't **like** one another, they **are** one another. Metaphor isn't about similarity. It's about identity.

II

Description isn't criticism, but it is useful. Jack Butler has built two wooden tables, five feet high, eighteen inches across and sixteen feet long, on which sit, or hang, forty-eight mixed-media constructions. The table legs and sides are drawn upon, painted, scratched and gouged, as if someone were intent on making something and then un-making it at the same time. Above the surface of each table is a wire suspended between copper tubes; a number of the constructions hang from these wires. In the corner of the room is a 12 foot square, gouache on cut paper piece called, **Science Painting**, composed of a dozen pieces of paper, sections of which are slashed, have cutout shapes and are generally activated by the hand and eye of someone with a rich and sensuous imagination. Taken together, these objects — along with a film, a number of other discrete constructions — are unlike anything gallery-goers will have seen before. The exhibition seems a puzzle, appears eccentric.

III

Claude Levi-Strauss liked miniatures because you could perceive the whole before its parts. The miniature is managea-

ble, comforting. The **Art/Science Tables** are not miniatures and they are not comforting. You apprehend the parts first and wonder if there is a whole. It's extremely disturbing.

IV

Here is a partial, arbitrary list of possible associations anyone might make with **The Art/Science Tables**. If you wish, you could call them metaphors, or even descriptions: an animal vertebrae, x-rays, the transparent thorax of a huge insect, a horseshoe of Hans Hoffman's colour squares, cruciform Red Rose tea boxes, surgical incisions, the curl of a dissolving cloud, Calder's circus, the scene of an artful accident, out-of-scale honeycombs, opaque bubbles inhabited by miniature gorillas, fetuses, the drawings of Pierre Bonnard, a print-maker's drying rack, blood, cave drawings, Francis Bacon's linear, electrified cages, shaman sticks, a gorgeous plethora of undersea creatures, the heart, a sense of play, sex, something not yet formed, Inuit and Tantric art, the body showing its stuff, a science fair, correspondence, collisions and clutter in the mind, death, the soul.

V

The **Science Painting** is remarkable. At first sight, it seems to be predominantly red; then it seems mostly off-white; finally it emerges a carnival of colour. The bottom section of paper forms a striking border: one side is composed of eight ovals, each of which is activated by at least two bright colours — green and yellow, blue and black, or red and orange; the opposite side is six minimally drawn heads (they look like fat commas) surrounded by similar bright, aggressive colours. The Matisse-like intensity of the colour and the rough grace of the paint-handling make this border piece a functional hook for a painting which is not so much composed as put together. On

the top of the painting are six outlines, vaguely human and menacing, like the red shadows of bellicose spirits. They hover about a ground of shaman markings which are like animal tracks. Butler's visual world is the embodiment of transformation and symbolic reduction: hearts become cariboo heads, fetus shapes become seahorses, lines scramble into forms, absences become presences. The entire piece is like a prototype for a mural, or a tapestry design, full of repeated images and lyrical tracteries. Everywhere the eye goes — and it is indiscriminantly attracted to one area of the painting after another, as if it were a visual candy-store — it comes up against suggestions of meaning. The painting is less about focus than about poetic associations. It is a kind of wonderfully disorganized catalogue, out of which the viewer can order pattern, symbol, meaning and other staples of comprehension.

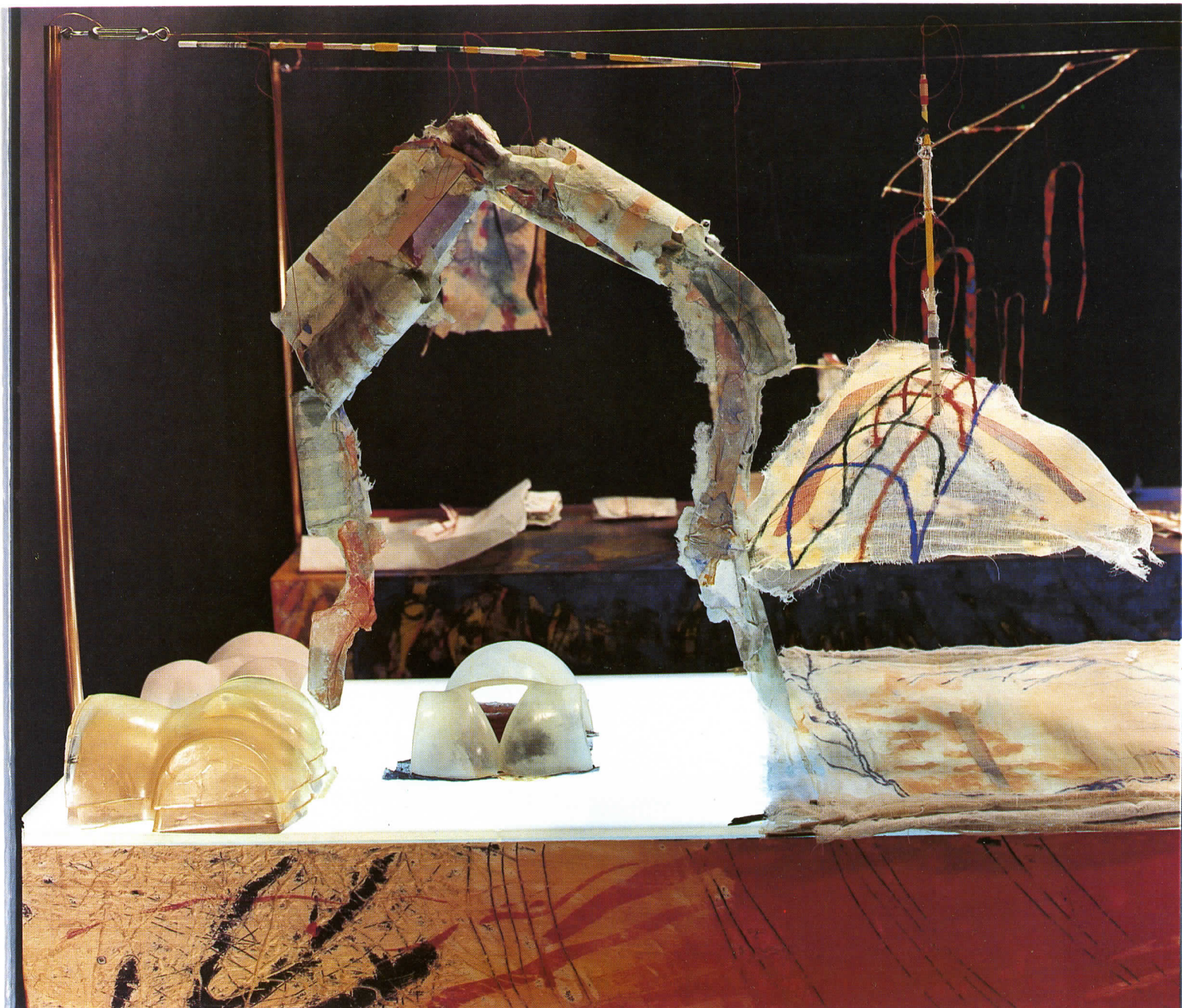
VI

The more Butler works, the more synthetic becomes his art. In retrospect, it's apparent that not only has this synthetic approach been evident throughout his life, but so has a sensibility inclined to take advantage of what most people would normally judge to be mutually exclusive attitudes. Butler came out of high school with a choice between two scholarships: one to Temple University as a medical student and one to Carnegie Tech in the visual arts. He chose the visual arts and now works as a medical artist and consultant for the Children's Hospital Research Foundation. In 1973 Butler dealt with the physical frustrations and coldness of the Arctic by engaging in Tantric art, which he describes as “. . . the hottest, sexiest stuff he could find”. Similarly, in 1976 when he was working on the huge **Venus** paintings, he was also building clay reconstructions of the developing genitalia, or “. . . tiny, little embryological Venuses” as he refers to them. In the Venus as a sexual icon and in the embryo as an object of study, Butler was obsessed with the source and the product of his art, at the same time that he was

working with both two and three-dimensional methods of expression. He was also simultaneously engaged with a micro and a macrocosmic world. Butler is characteristically lucid on the significance of these two conceptual approaches and about their relationship to the intersections between art and science: “The developing of the embryo is more like art than science because it is based on our conceptual grasp of what's happened. So little is known, so little evidence has been gathered and so few examples exist. You start with one cell and then several cells make as little flat plane that curves on itself to make two planes, that curves on itself again to make three planes and as it is being folded it forms a magnificent, tiny human being, like a Fabergé jewel, a breathtakingly beautiful, transparent human. The effect and the presence of a real fetus is emotionally, psychologically and artistically overwhelming. There is also the shocking aspect in the fact that most of the fetuses I would see had been aborted and my study was derived from that; so that the magnificence of the form, the beauty of the life and the tragedy of the death were all packed into this daily study. It couldn't help but have a deep effect on the nature of my work. And then the transition from that into work with the lungs, and its spiritual implications and the sheer, spatial structure, the openness of air passageways, coming first from the genital openings, later to something at the very heart and breath of life . . .”. And then Butler catches himself in this reverie of science, realizing that he is imagining himself into the future: “Not the heart”, he says, “Just the breath, because the project I hope to work on next is the development of the embryological heart which is a more sculptural entity, appropriate to the fact that I'm already going in a more sculptural direction. I think that these things align themselves in life in irresistible patterns”.¹

Jack Butler, a male Cassandra and his own best counsel,

continued on page 6



K. J. Butler

Detail Art/Science Tables; plaster, acrylic, castpaper, gauze, flourescent light table, etc.

Garry Allan Photo

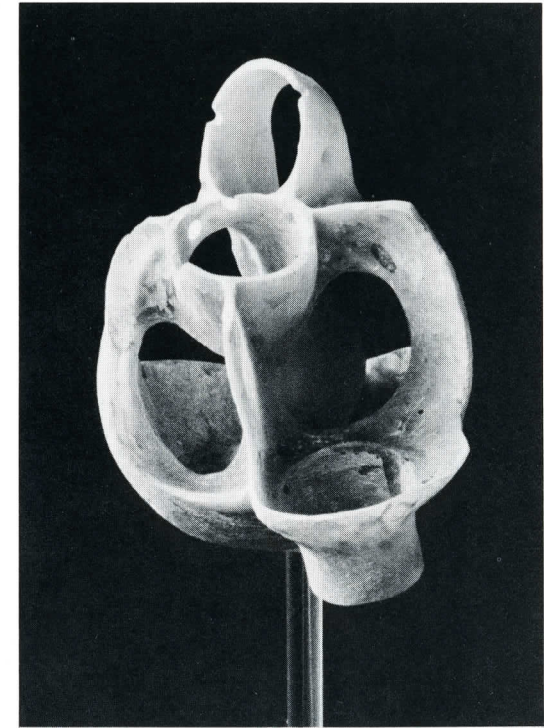
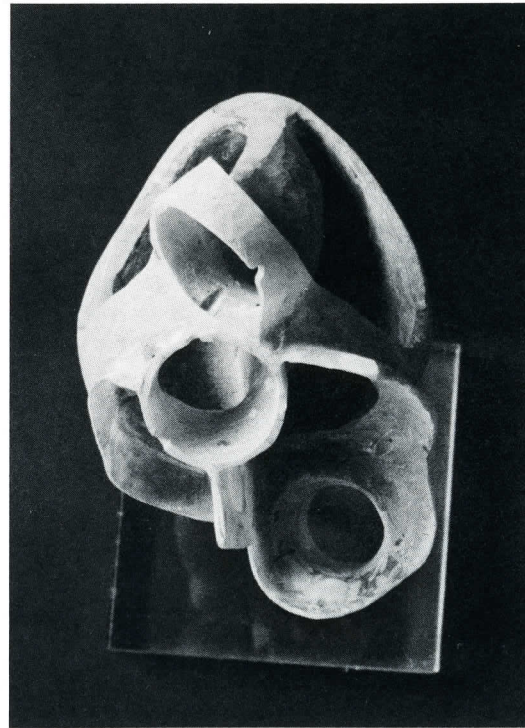
is now involved with the heart project. Irresistible patterns, to be sure. What is it that Allen Ginsberg says: "Mind is shapely"? Butler's work assumes more and more shape. The edges of science and art blur, the memory of research and the impulse of art-making coalesce. Distinguishing one from the other is like trying to separate the dancer from the dance. Somewhere in the *Art/Science Tables* is a magnificence, an intermingling that salvages art from the labyrinth of solipsism and science from the determinations of technology. Or as Jack Butler puts it: "I think that the day of art as a fundamental forming principle of culture on par with science is coming. Science is going to have to take the broad, general scanning, metaphorical approach

that art is using. It can't go on feeding itself into technology for ever. And art, conversely, is going to have to take a firmer stand in believing in its own products as true, workable models for life and the world.

Robert Enright,
Winnipeg, March, 1983.

Robert Enright is the Western Correspondent for C.B.C.'s *Stereo Morning*. He is also the editor of the quarterly review, *Arts Manitoba*.

¹This quotation, and all others, are taken from unpublished interviews with Jack Butler in his Winnipeg studio in late November, 1982. The interviews were conducted by the author.



The Heart of the Heart, Fiberglass and Polyester resin, 1982, length 6 inches.

K. J. Butler Photo

Exhibition Contents

Art/Science Tables, Two wooden tables, 5' x 18" x 16' each, including 48 mixed media constructions supported by the tables.

Science Painting, 12' x 12', gouache on cut paper, 12 units designed to hang in pairs flanking the corner of a room.

The Child with Congenital Adrenal Hyperplasia, Videotape, 55 Minutes, color, sound, includes models of embryological development and animated sequences explaining embryology, endocrinology.

Forty Photographs of models of the development of the genitalia in the embryo and fetus, the disgenesis involved in C. A. H. (see film above) and surgical corrections of the disease, explained by clay models.

Fetal Lung Development, five acrylic models approx. 2' x 2' overall display unit.

Ten photographs of the anatomy and embryology of the Heart, from the sketch books.

Heart of the Heart, Fiberglass and polyester resin.

Parable, Hanging Construction 8' x 30" x 30".

Close Lamina, Stacked Paper collage over Light Table, 6' x 6' x 40".

Blastocyst, Construction in Light Box, 7" x 7" x 27".

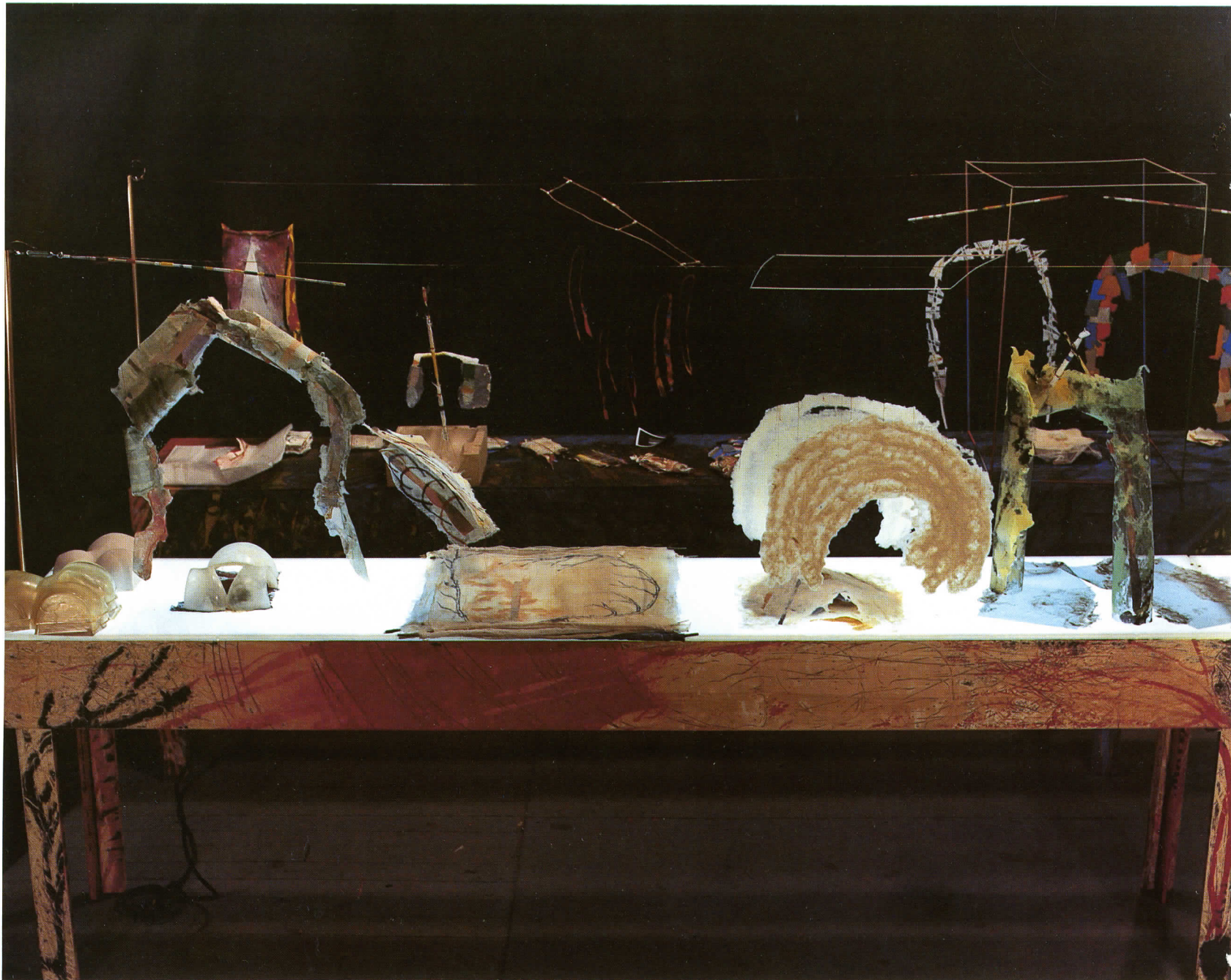
Amnion, Construction in Light Box, 10" x 10" x 6".

Letter from the arctic, Construction in Light Box, 5½" x 6½" x 6½".

Through My Children, Construction in Light Box, 5½" x 6½" x 6½".

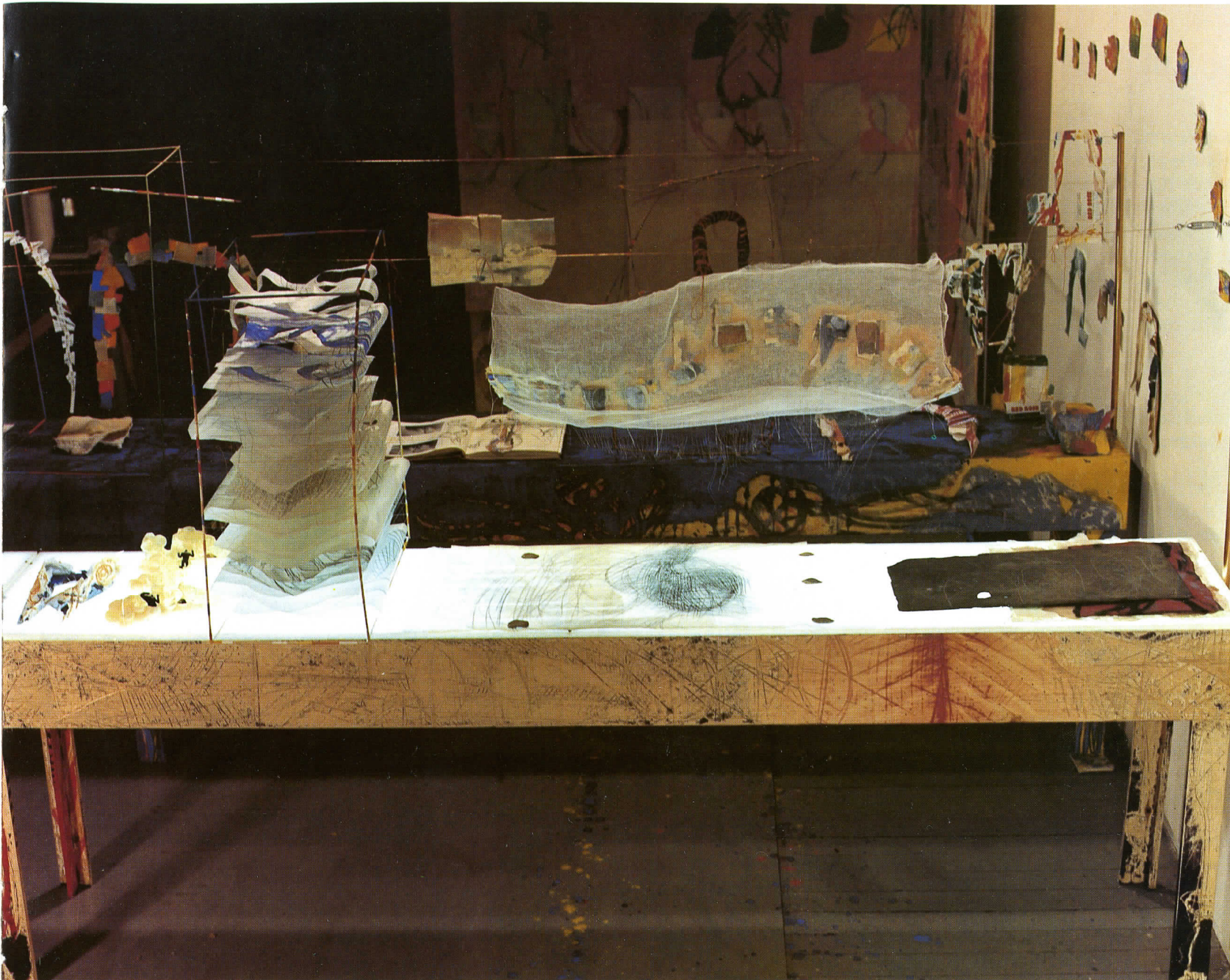
Dream, Dream, Construction in Light Box, 5½" x 8½" x 8½".

Open Light, Construction in Light Box, 7" x 7" x 30".



K. J. Butler

View of left half of "Art/Science Tables"; 2 tables 5' x 18" x 16'; mixed media, 1980-83.



K. J. Butler

View of right half of "Art/Science Tables"; 2 tables 5' x 18" x 16'; mixed media, 1980-83.

Garry Allan Photo

K. J. Butler: The Medical Work

Jack Butler started his medical work in 1975 soon after he left the Arctic. He was faced with the artist's perennial problem of finding a way to earn money which would not interfere too much with his art. As a teenager he had done some medical illustrations for a pathologist in Pittsburgh, in particular, recording congenital anomalies which the pathologist found during the course of his work. So when Butler met Dr. Alan Decter and discovered that he wanted to undertake a project which required a medical artist, Butler volunteered. So began his work with several doctors on a succession of projects at the Children's Hospital in Winnipeg.

Butler admits that, at first, he regarded his medical work as a necessary evil which interfered with his painting and sculpture. But as he became more involved he came to accept the medical work as a legitimate focus for his creative energy. He also came to recognize the unity of all his creative activity.

It is ironic that his first project, which was initiated by Dr. Decter and later came to involve Dr. Jeremy Winter, required the construction of a series of models illustrating the embryonic development of the genitalia; ironic because at that time he was also painting his **Venus** series. Butler found that the simultaneous involvement in these two projects caused him considerable tension. Subsequently, as he came to accept the integrity of all his work, his medical work and his art have both changed direction somewhat, and they now complement each other in more subtle but more interesting ways.

The influence of his medical work on his studio activity is discussed elsewhere in this catalogue and can be experienced by the viewer through this exhibition. The opposite influence of Jack's artistic experience on his medical work is also important to document, because it explains the unique contribution he has made, and continues to make, in this field.

However, it is not only his artistic skills which have enabled him to carry out his medical work so successfully. These were essential, but they would have been inadequate without Butler's unusual intellectual ability and tenacity. They enabled him to grasp the sophisticated embryological and anatomical concepts which were essential to the work. They also enabled him to take some unsolved embryological problems to conclusions which represented original scientific work. For instance, in

trying to understand how the alveoli fit together to fill all the space in the lung, he progressed through a study of the structure of soap bubbles to the concept of tessellations. Tessellations turned out to be a type of pattern in which he had long been interested but for which he hadn't a name. To complete the circle, these patterns provided the solution for his problem of the microscopic structure of the lung.

Butler's specific artistic training and experience have been valuable because they have provided him with essential technical knowledge and skills. Special materials and sophisticated techniques are required to build accurate models of complex, anatomical structures. Butler's notebooks are full of notes and photographs documenting in detail both the failures and successes in attempting to build these models.

However, his contribution as an artist to this scientific work goes beyond technical skill and knowledge. The artist uses the intuitive, spatially-oriented right brain to create his work, the scientist the logical, sequentially-oriented left hemisphere. The artist's way of conceptualizing is necessary to produce the models on which Butler works. Butler is able to translate the available two-dimensional, anatomical information into three dimensional concepts, and then further realize these in permanent models in a way which the doctors with whom he collaborates cannot. In developing his models of the airways, for instance, he first fashioned the space that fills the airways and then he applied a shell to it. He then removed the substance representing the space and a model of the anatomical airways was left. Similarly, in order to develop an accurate model of the heart, he has recognized that the fundamental issue is the relationship of the four valves of the heart — four holes in space. They are the skeleton upon which an accurate model of the heart can be built.

These are uniquely artistic, right brain approaches to scientific problems, and these are Butler's most stimulating and important contributions. It is also at this level that the unity of all his creative work can be appreciated. Tessellations filling up the space of the lung, putting a shell around a construct of emptiness, relating four holes in space. Are these descriptions of his art or of his science? At this level the margins of art and science blur and they merge into a seamless web of creativity.

Dr. Martin Reed is an Associate Professor, Department of Radiology, Faculty of Medicine, University of Manitoba, as well as the Head of the Dept. of Radiology, Children's Hospital.

K. J. (Jack) Butler

Born

Pittsburgh, Pennsylvania, 1937

Canadian Citizen, 1975

Education

B. F. A. Carnegie Institute of Technology
(Painting and Sculpture), 1960

M.G.A., University of Illinois (Painting and Printmaking), 1962

Professional Teaching Experience

University of Manitoba, 1962-64

University of Saskatchewan Summer Art School at Emma Lake, 1963

Edinburgh College of Art, Edinburgh, Scotland, 1964-65

Carnegie Mellon University, Pittsburgh, Assistant Professor, 1964-66

Government of the Northwest Territories, Baker Lake, Arts and Crafts
Officer, 1969-1972

University of Manitoba, Sessional Lecturer, 1976 and 1976

Fine Arts Advisor to Sanavik Co-op, Baker Lake, 1972-1976

Fine Arts Advisor to Ministic Indian Co-op, Garden Hill, Manitoba,
1974-1976

Medical Artist for the Children's Hospital Research Foundation, Win-
nipeg, 1976-1981

Selected Exhibitions

1962

Design Associates of Winnipeg

1964, 1966

Yellow Door Gallery, Winnipeg

1965

Edinburgh College of Art, Scotland

1966, 1967

Galleries III, Charlottesville, Virginia

1968

Hewlett Gallery, Carnegie Mellon University, Pittsburgh

1968, 1969

Lee Nordness Gallery, New York

1975

York University, Toronto

The Upstairs Gallery, Winnipeg

Robertson Galleries, Winnipeg

1977

Winnipeg Art Gallery

1978

Upstairs Gallery, Winnipeg

1979

Arthur Street Gallery, Winnipeg

1980

The R.C.A. Exhibition, Winnipeg Art Gallery

1981

Confederation Centre Art Gallery and Museum, Charlottetown

Agnes Etherington Art Centre, Queen's University, Kingston

Brian Melnychenko Gallery, Winnipeg

Selected Group Exhibitions

1963

Winnipeg Biennial, Winnipeg Art Gallery

1964

Canadian Society of Painter-Etchers, Montreal

Burnaby Print Society, Burnaby, British Columbia

1965

Edinburgh College of Art, Scotland

Lee Nordness Gallery, New York

Library of Congress Print Show, Washington

Butler Institute of American Art, Youngstown, Ohio

Royal Scottish Academy, Edinburgh

1965, 1967

Philadelphia Print Club

1966, 1967

Westmoreland Museum of Art, Greensburgh, Pennsylvania

1968

Appalachian Corridors, Charleston, West Virginia

Associated Artist of Pittsburgh

Potsdam Prints, New York

Lee Nordness Gallery, New York

1974

New Prints from the Screen Shop, Winnipeg Art Gallery

Manisphere, Winnipeg Art Gallery

Edmonton Art Gallery

9 Out of 10, A survey of Contemporary Canadian Art, Art Gallery of
Hamilton

Scan, Vancouver Art Gallery

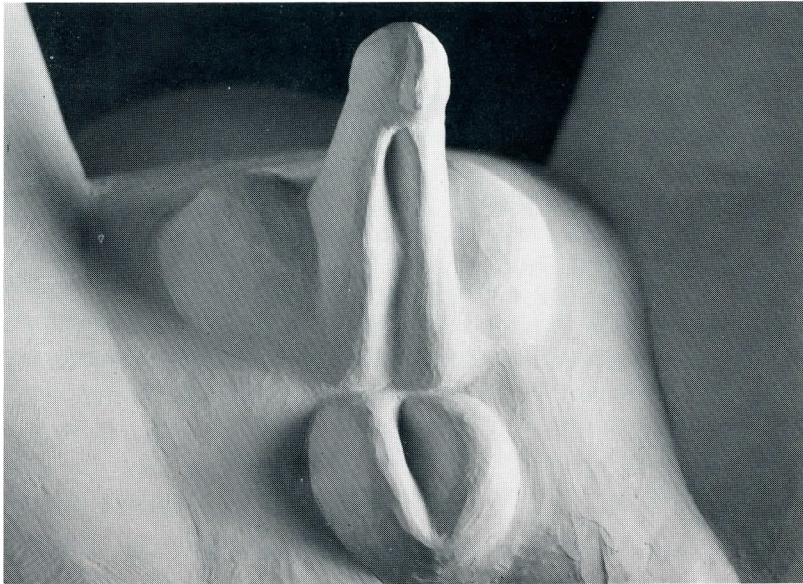


Gouache on cut/torn Okawara paper. K. J. Butler; "Science painting" — 12' x 12', corner installation, 1982.

Garry Allan Photo

1975
9 Out of 10, A Survey of Contemporary Canadian Art, Kitchener-Waterloo Art Gallery
Winnipeg Artists II, Winnipeg Art Gallery
K. J. & S. Butler, Paints, Fredericton and Saint John
1976
K. J. Butler and Wm. Pura, Gallery III, University of Manitoba, Winnipeg
Spectrum Canada, R.C.A. Olympic Exhibition
Manitoba Olympic Exhibition, Montreal
Western Untitled, Glenbow-Alberta Institute, Calgary
1977
Artist's Prints and Multiples, Winnipeg Art Gallery
1978
27 Artists and the Manitoba Arts Council, Manitoba Archives, Winnipeg
1979
Graphics Gallery, Ottawa
1980
Winnipeg Perspective, Harbourfront Art Gallery, Toronto
The I.C.A. Exhibition, Winnipeg Art Gallery
Canadian Art Dealers Association Exhibition at Harbourfront, Toronto
1982
In-of-Handmade paper, Evelyn Aimes Fine Art, Toronto
Medical Art
1976-1980
The Child With Congenital Adrenal Hyperplasia, 55mm. 16 mm color film, in collaboration with Dr. J. Winter, Dr. A. Decter and Medical photographer Rob Mathieson
1981
Morphogenesis of the Terminal Acinus of the Fetal Lung; acrylic models; in consultation with Dr. V. Chernick and Dr. W. Thurlbec.
1982-83
Embryology of the Heart, Morphogenesis, anatomy, Malformations; models in fiberglass and polyester resins and video tapes; in consultation with Dr. G. Collins and Dr. M. Reed.
Permanent Collections
Edinburgh College of Art, Scotland, 1965
University of Virginia, 1968
Canada Council Art Bank, 1973, 1976, 1977, 82
Winnipeg Art Gallery, 1974
Vancouver Art Gallery, 1975

Province of Manitoba, 1975, 1977
Owens Art Gallery, Mount Allison University, 1979
Confederation Centre Art Gallery and Museum, 1979
Agnes Etherington Art Centre, Queen's University, 1979
Awards, Grants, Commission and Honours
Purchase Award, Philadelphia Print Club, 1966
Heinz Award, Associated Artists of Pittsburgh, 1967
Katz Award, Associated Artists of Pittsburgh, 1968
Canada Council Special Project Grant, 1972, 1977
Canadian Award at Manisphere Exhibition, Winnipeg, 1974
Manitoba Arts Council Special Project Grant, 1975, 1977, 1979
Manitoba Arts Council commission for Edition of Lithographs, 1976
Elected to Membership, Royal Canadian Academy of Art, 1976
Canada Council Arts Grant B., 1978
Manitoba Arts Council Senior Arts Grant, 1978
Manitoba Arts Council Visual Arts Grant, 1980, 1981
Canada Council Project Grant, 1981
Board of Directors, Prairie Theatre Exchange, Winnipeg, 1982
Originating members, first president, Manitoba Arts Alliance, 1982
Recent Workshops/Seminars
Painting Workshop, Holland College School of Visual Arts with Confederation Centre Art Gallery and Museum, Charlottetown, 1979, 1981
Eskimo Arts in Conference, The Keewatin, two lectures for Arts and Culture of the North, Winnipeg Art Gallery, 1979
Contemporary Inuit Graphic Art, Lecture and Panel Discussion for The University of Michigan, Ann Arbor, 1979
Visiting Artist, Bemidji State University, Bemidji, Minnesota, 1981
Visiting artist, University of Saskatchewan, Saskatoon, March, 1982
Visiting artist, University of Windsor, Windsor, Ont., Feb., 1983
Publications
Baker Lake Print Catalogue, 1970
Baker Lake Drawing Catalogue for Winnipeg Art Gallery and Vancouver Art Gallery, 1972
My Uncle Went to the Moon (Shamanism in Baker Lake), for ArtsCanada, special editions, 1973, 1977
Work Reproduced
Canadian Art Magazine, 1964
Art in America Magazine, 1967
History of Art, H. W. Janson, Abrams Inc., New York, 1969



Plasticine models of genitalia from “The Child With Congenital Adrenal Hyperpasia”;

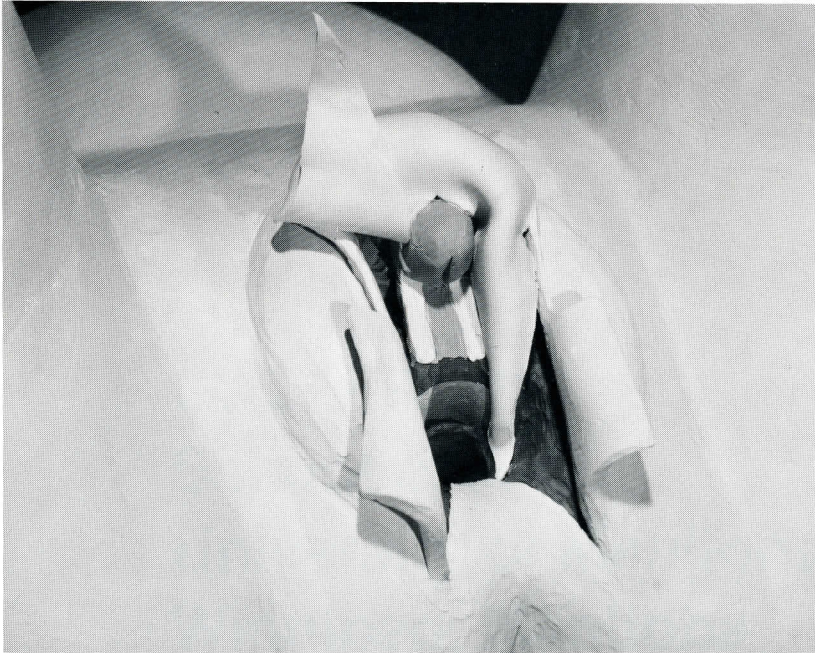
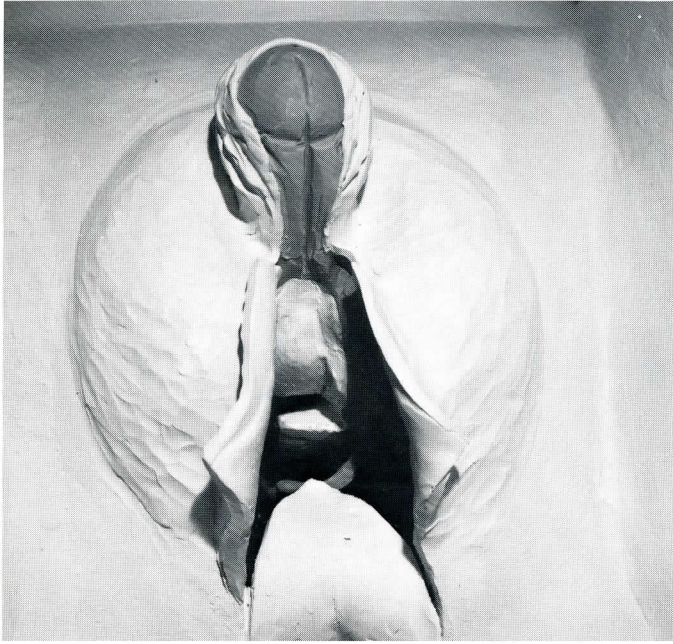
1979, a 55 minute, 16 mm colour film made in collaboration with Dr. J. Winter, endocrinologist, Dr. A. Decter, urological surgeon, and Rob Mathieson, medical photographer.

top left: Genitalia early in the ninth week of life of the embryo; prior to sexual differentiation.

bottom left: Female Genitalia, late in the ninth week of life of the embryo.

top & bottom right: Models of surgical procedures for the reconstruction of the genitalia of children with C.A.H.

R. Mathieson Photo



R. Mathieson Photo

Artist's Acknowledgements

The artist would like to thank the Manitoba Arts Council and the Canada Council for their financial support to produce the work; Robert Enright and Martin Reed for their catalogue contributions; Garry Allan, R.B.P., for all colour photography; the Children's Hospital Educational Research Foundation; as well as Dale Amundson and Gallery 1.1.1. for continued support of this project.

