

The Statue “Polar Theme”

**at Philips Research Laboratories
Cross Oak Lane, Salfords, Surrey**



***A history compiled by Phil Lloyd
September 2023***

Since the closure of Philips Research Laboratories in 2008, a number of retired employees have been working to ensure that some lasting recognition of this world-class research facility remains visible at the location. David Paxman has very ably led this initiative, with help from Peter Bunn, Phil Lloyd, Graham Baker, and others.

This document serves to keep on record information relating to the statue which was a distinctive feature of the laboratories for nearly 50 years. Much of the background to the statue's existence is thanks to the vigilance of Cherie Banfield and Gordon McGinty, who rescued a file of information which could have been lost when the laboratories closed.

Introduction

Mullard Research Laboratories, later to become Philips Research Laboratories (PRL), was founded in 1946 on a site in Salfords, situated between Redhill and Horley in Surrey. Use was made of an existing, rather unprepossessing old factory building on the north side of Cross Oak Lane. The whole existence of this new part of the Mullard Radio Valve Company was down to the efforts, and foresight, of Mr S S Eriks, who was then both managing director of Mullard and chairman of Philips Electronic Industries.

During the following 15 years, the laboratories firmly established themselves as front-runners in several fields of UK electronics research, more staff were taken on, and the site expanded accordingly. Initially, extra buildings were added within the existing perimeter, but by the late 1950s it was necessary to expand further onto land acquired on the south side of Cross Oak Lane. Three new multistorey buildings were commissioned, forming a T shape, with a grassed forecourt facing the road, and were completed in 1961. There was therefore a "north site" and a "south site", either side of Cross Oak Lane.

To recognise this phase of the laboratories' development, it was decided that the new buildings should be complemented by a suitable sculpture placed on the forecourt, and visible from the road. The sculpture, which was to reflect the laboratories' work in some way, would be the winning submission in a competition.

The Sculpture Competition

Once a competition had been decided upon, Mullard Ltd were able to assemble an impressive panel of distinguished judges consisting of Sir Hugh Casson (architect, designer and writer, who was director of architecture for the 1951 Festival of Britain), Sir Kenneth Clark (art historian, author and broadcaster, who not many years later introduced his famous TV series "Civilisation"), Mr James Fitton (painter, illustrator and poster designer), and Sir Gordon Russell (designer and craftsman, known for his range of furniture designs). Mullard already had a good record as patron of the arts, having, for instance, commissioned a Barbara Hepworth sculpture for Mullard House in 1956, where it became a well-known feature. The photo shows, from left to right, Sir Kenneth Clark, Mr James Fitton, Mr C Barwell of Mullard Ltd., Sir Gordon Russell, and Sir Hugh Casson.



The four judges nominated ten sculptors and invited them to submit their idea for a suitable sculpture, along with a maquette, following a visit to the laboratories so that

they could perhaps get a feel for what was needed. The prize for the winning submission was 500 guineas (i.e. £525 in 1961, worth over £12,000 at 2023 values), with a fee paid for the creation of the design. The cost of producing the winning sculpture, and installing it on site, would be borne by the Company.

By early 1961, the ten submissions had been received, along with biographical notes, and the panel of judges were able to make their choice. This was announced by Sir Kenneth Clark at an event at Mullard House on 26th April, who also spoke about the competition. Mr S Eriks, Managing Director of Mullard Ltd then made the award to the winner Mr Keith Godwin, for his submission "Polar Theme".

Designer's Notes from Keith Godwin, Sculptor

"I found the visit to the laboratories extremely stimulating, especially in view of the fact – perhaps because of the fact – that I understood practically nothing of what I was shown, and was able, therefore, to be suitably astonished.

The site, intimately enclosed behind the glass entrance and the wings of the building, with viewpoints from all sides and above, seemed to need a vertical composition not making too solid a block.

The theme, after the pursuit of a number of electronic concepts not understood, evolved as a simple statement that opposite poles attract and like poles repel.

The material, rich, with an interest in itself, hence ciment fondu with a green Genoa marble aggregate rubbed down to polish the marble, and copper inlay to provide a linear accent to the main mass.

The finished job to be 6ft high mounted on a rectangular base of concrete faced with Westmoreland Green slate – dimensions 2ft square by 18ins high.

The Sculpture is, in fact, intended as decoration, not a statement of philosophy."

Photos of the other nine submissions can be seen in an appendix to this document.

The Unveiling Ceremony

Here's the Mullard Press Department announcement from 20th October 1961, the day the statue was unveiled:

"Since their formation, Mullard Research Laboratories have been at the forefront of electronic research and they now serve the widest interests of the electronics industry, industry in general and the Government.

The main fields of investigation undertaken are solid state physics, vacuum physics and circuit physics. Over 700 people including 200 qualified scientists are employed here.

The increasing demands of the laboratories have meant a continuous programme of expansion to provide the necessary laboratory space for the scientists to work under appropriate conditions. To mark the completion of the latest extensions finished earlier this year, it was decided to obtain a sculpture to symbolise the work of the laboratories and complement the architecture of the new buildings.

Accordingly, a competition was organised in which ten sculptors were invited to submit designs to a judging panel comprising Sir Hugh Casson, Sir Kenneth Clark, Mr James Filton and Sir Gordon Russell. Of these ten designs the one by Keith Godwin was considered to be the most suitable, and his finished work, an abstract in three dimensions to which he has given the name "Polar Theme" will be unveiled here today.

The design takes the form of a dual vertical composition on the theme that opposite poles attract and like poles repel. The material is ciment fondu with a genoa green marble aggregate rubbed down to polish the marble, and copper inlay to provide a linear accent on the main mass.

The sculpture will be unveiled by S.S. Eriks, K.B.E, Managing Director of Mullard Ltd."

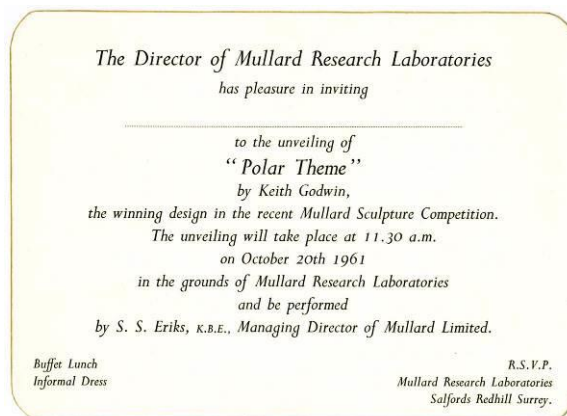
Official invitations went out to the judging panel, representatives of Mullard Ltd, and the Philips Laboratories in Eindhoven, the Netherlands, as well as local councillors and planning officers.

Representing the Company on the day were, amongst others, original founder Mr S R Mullard, Mr S S Eriks (Managing Director of Mullard Ltd), and Mr C Barwell of Mullard House. Laboratory representatives included Mr P E Trier (Director of MRL), Mr J Brunskill, Mr E A Stevens, Dr P Schagen, and Mr G Taylor.

Local authority representation included the Mayor of Reigate, Councillor E G Stoneham; the Vice-chairman of Dorking and Horley Rural Council, Councillor M J Thurston; and Chairman of Horley Parish Council, Councillor C E Le Grice.

The photo shows the main guests arriving, led by Mr J Brunskill of MRL.

Unfortunately, no member of the judging panel was able to attend.



Speeches

Both P E Trier and S S Eriks gave speeches as part of the event. What they said is of interest now, as it gives an insight into the laboratories' role in the 1960s. In particular, their words reveal the management view of how the laboratories fitted into the local environment, why companies like Mullard and Philips needed separate research facilities, their role with regard to liaison with UK government departments (an important aspect at the time), and the outlook in a period of Company expansion.

Here is the text of P E Trier's speech:

"Mr Eriks, Ladies & Gentlemen

It is a great pleasure to welcome you all here for the unveiling of Mr Godwin's sculpture, the winning entry of the recent Mullard Sculpture Competition. We are particularly happy to welcome His Worship the Mayor of Reigate; the Vice Chairman of the Dorking and Horley RDC; and representatives of the Surrey County Planning Authority.

Our relations with the public authorities in the district have always been friendly. We realise that they have a tremendous task in maintaining the countryside against the insatiable encroachments of suburbia, industrial growth, and traffic. On the other hand, we have counted ourselves very fortunate in being allowed to develop this research laboratory in country surroundings, and yet within easy reach of London where our essential contacts with government departments, educational bodies, professional societies and other industrial firms are centred.

We have therefore always tried to live up to our responsibilities toward the local community which gives us space for our work, supplies essential services, and provides homes for many of our staff and their families.

In the early 1950s, the laboratory grew very rapidly to a size of 700. We have since then quite deliberately contained further staff expansion in order to improve the facilities here which were

stretched to the utmost in 1956, and also to avoid further pressure on the housing resources and public services of the neighbourhood.

And yet we have not stood still in this period. We have expanded our gross floor space from 90,000 to 155,000 sq ft by the addition of the new South Wing which provides the setting for our unveiling ceremony today; we think you will agree that we now have a laboratory site which may be viewed with pride not only by ourselves but by the locality in which we live. The sculpture competition which brings us together today is a token of the attitude of the Mullard Company towards its wider responsibilities, an attitude consistently expressed in the substantial support given to many major university expansion projects.



We in the Research Laboratory are very happy to be members of such a progressive Company, with its central aim so clearly directed at the search for new techniques, new products, and new markets. I am sometimes asked why the Company needs a research laboratory like this, when it already has such extensive development laboratories in the factories. The answer can be made into a very lengthy dissertation, but can really be summed up quite briefly: it is to help the Company enter the many new fields of application of electronics; and at the same time to increase research on new materials and new material process techniques, especially in the solid state. These new materials, some of them with very startling properties at extremely low temperatures, such as superconductivity, are making considerable impact on the whole of our industry. An indication of the importance of low-temperature work is the recent provision of our own helium-liquefier plant.

The challenge of the many new ideas that want investigation needs a continuous check against the available facilities, technical skill and finance. Electronic research has become very expensive; many of the most attractive new projects are difficult to put on a basis of profitable returns, and there is increasing competition from all sides for the best brains, the most inventive experimenters, and the most highly skilled craftsmen. In such a setting, we must remain selective in the projects we tackle, and self-critical about every aspect of our work. We shall do our best to foster these qualities, and to make ourselves a continuing asset to the Company in the exciting but highly competitive years ahead.

I now want to say a word of special welcome to our Managing Director, Mr Eriks. He works under very great pressure of business, and his visits to us have therefore been highly prized occasions. Nevertheless, he has been the mainspring of our motivation and growth right from the beginning. Towards the end of the last war he foresaw the need for a central research laboratory for the demands of the new electronic age. He started the laboratory at the end of 1946, and over the whole of these 15 years has given us his interest, his encouragement and his support. This has enabled us to grow from an activity mainly devoted to equipment development at the beginning into a comprehensive laboratory with the threefold aim of autonomous research, support for our product groups, and cooperation with the large government research establishments. We therefore owe Mr Eriks a great deal.

It is a particularly happy moment to see him here today, because only two days ago he was received at Buckingham Palace by the Queen to be invested with the insignia of the Honorary KBE recently conferred on him. For over 30 years he has been the very embodiment of the Mullard Company – and it must give considerable pleasure to Mr Mullard, who is with us today, to have watched the growth of the Company in these years. The award of this very rare honour to Mr Eriks marks the public recognition of his energy, his foresight and his courage which have been applied throughout, not only in the service of the Company, but for the benefit of the national economy and well-being. I therefore am most happy to be able to call on Mr Eriks to speak to us and to unveil Mr Godwin's sculpture."

S S Eriks then spoke, and this is what he had to say:

"I always enjoy visiting the Research Laboratories and it is one of my regrets that I do not come here more frequently, not only because of the delightful surroundings but also because of the atmosphere of vigour and excitement which always fills a really live research laboratory.

Mr Trier has very kindly referred to the support we give to these Laboratories – and I have to confess there is some truth in what he says! In a highly scientific industry like this, one has to keep abreast of all that is happening as well as making one's own contribution if one is to have a continuing stake in the future. No industry can be said to be viable unless it has a properly balanced combination of research facilities, development facilities, factories and commercial departments.



Indeed it goes deeper than that. I believe that Industry, which essentially benefits by new scientific developments, has a prime responsibility to pull its weight in achieving them. And if you are operating in as big a way as the Mullard Company you have a special responsibility to ensure that the quality of your research laboratory is such that it really is breaking new ground, and at the same time able to put extensive facilities at the disposal of Her Majesty's Government. You will see, therefore, why the establishment of a first-class laboratory like this has for many years been a basic principle of our philosophy.

It may, of course, be said that there is nothing very new about the connection between Industry and Science and that such a connection has in fact existed from the very beginning of the industrial revolution – and, I suppose, before that – and that of course is true, but what is equally important I think is that the close link between science and industry is growing with every year that passes.

The door – if I may use such a phrase – between the factory and the laboratory must nowadays be always wide open, and those who are responsible for industrial production must always be moving to and from one to the other if we are to maintain our leading position, on which our very existence depends, and if we are not to be out-paced by others.

The very fact that we have thought it worthwhile to invest great sums of money in building and equipping this up-to-date laboratory is, I think, proof that we recognise this essential fact and that we are prepared to face the challenge of this new and strange world into which we are all of us moving, and that it is especially true of the sphere of electronics.

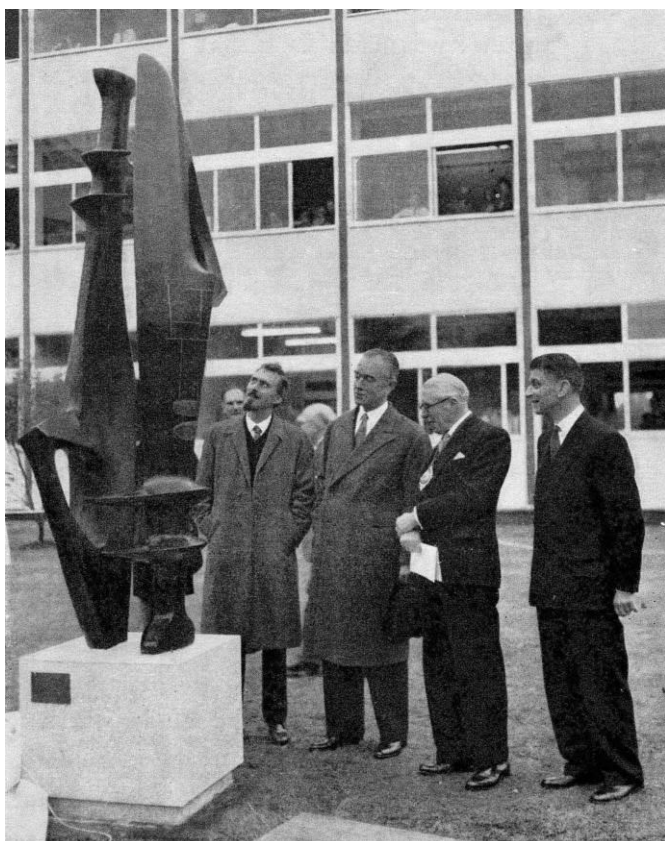
I always think that members of an industrial research laboratory need an unusual combination of qualities which I like to feel are being cultivated here. People often get the impression that research men are long-haired and erudite, speaking in a language which they alone understand and with no facility for communication with other people. Some academic research men may be like this, devoted to the pursuit of knowledge, idealists by temperament and impractical by nature. But an industrial research scientist, whilst having the ability to work on the frontiers of knowledge and grapple with problems whose very formulation is difficult, must also bear in mind the ultimate repercussions of his activities. He must have a sound nose for what is practicable and realise that although his own investigations may start out on a wide front, such as solid-state physics, they will ultimately be narrowed down, perhaps by other teams in other laboratories, until ultimately they find their expression in a product such as a transistor which can have very far-reaching effects on the national economy and way of life.

It is proper that such a laboratory should be housed in worthy buildings and as Mr Trier has already said, our emphasis in recent years has been on improving facilities whilst keeping our numbers constant. These buildings are our latest addition to this end and there are already plans for a further block.

It is also natural that we should mark our progress in a fitting way by commissioning a sculpture which would form part of the site. In doing this we were fortunate in obtaining the

advice of a distinguished panel of Judges, Sir Hugh Casson, Sir Kenneth Clark, Mr James Fitton, and Sir Gordon Russell, none of whom, unfortunately, is able to be present today. This panel nominated ten sculptors to submit entries and the winner was Mr Keith Godwin whose work was chosen as having the most merit.

You may feel that this sculpture expresses a strong tension between its two elements, and you may also go on to express the hope that it will inspire physicists to unravel the exact nature of polar attraction, the understanding of which I am told still eludes their grasp. However, I am inclined to agree with Wilde when he said that "Art never expresses anything but itself", and I have great pleasure in unveiling "Polar Theme" by Keith Godwin."



The photograph on the left, from the December 1961 "Mullard Outlook" magazine, shows the statue after the unveiling with, from left to right: sculptor Mr Keith Godwin, Mr S S Eriks, The Mayor of Reigate and Mr P E Trier. The event was witnessed by the laboratory staff, as can be seen in the right-hand photograph.

Alongside is a photo of the commemorative plate fixed to the front of the statue's base.



The following photographs were among several taken by a London photographer in 1962, at the request of the Mullard Press Department:



Looking after the Statue

Ciment fondu is a rapid-hardening cement with a high aluminium content. Depending on how it is manufactured, it has varying degrees of porosity. This was the base material of the statue, with the high polish being provided by the included marble aggregate.

By 1986 it had become clear that the statue was in need of some maintenance, and Keith Godwin visited PRL to inspect it and offer advice. This was basically to clean it with a normal detergent, repair any cracks with an epoxy resin filler, rub it down with wet and dry paper, and then lacquer it with epoxy paint. This was done, using a colour-matched epoxy resin filler formulated by PRL chemist Ron Gill.

Over subsequent years the statue was occasionally cleaned to preserve its appearance, but no further remedial work was undertaken as far as is known.

The Statue following the closure of PRL

In 2008, PRL finally closed its doors, with the remaining research activities transferring to new premises in Cambridge. The statue was left behind. The north site had already been sold to Titan Travel Ltd in 1999, and the south site was sold to Gatwick-based aviation parts supplier Aerotron Ltd in 2009. With no use for the majority of the old PRL buildings, Aerotron demolished them, leaving just one newer building – and the PRL statue!

Many years passed without Aerotron making use of the site, but fortunately the statue was left undisturbed. In 2013, Peter Bunn (previously head of PRL's Engineering Division) made an inspection to assess the statue's condition. Over time there had been inevitable deterioration due to weathering, and although it was still in one piece and firm on its plinth, some of the statue's finer detail had been lost, especially in the upper half. In particular, the upper curved "winglets" had almost completely disappeared.

This photo, by PRL photographer Keith Smithers, shows it as it was in 2010.



Given the uncertainty over the statue's future at the time, in 2013 David Paxman made a scale model of the statue out of plaster, based on dimensions derived from photographs. You'll see from the photo alongside that he made a very good job of this indeed. Don't be misled by the perspective, though! At a scale of one tenth, the model's overall height is just 10in.



The PRL south site changes hands again

Ultimately, Aerotron decided not to base their activities in Cross Oak Lane, and sold the south site to Goya Developments in 2018. Goya cleared the site further, and went on to build five warehouses on the land, as "North Gatwick Gateway". There was still great uncertainty as to the future of Polar Theme, and the PRL retirees group maintained contact with both Goya and the local planning authority Reigate & Banstead Borough Council (RBBC) regarding the statue, and recognition of the previous existence of PRL.

In 2019, RBBC made repair and restoration of Polar Theme a planning requirement, and Goya proposed to give the name "Polar Drive" to the main road running through the site.

POLAR DRIVE

The coordination of the complex and expensive task of rejuvenating the statue was undertaken by Jago Brown of Goya, and in 2020 it was taken away for expert attention by Richard Rogers Conservation Ltd., who advised that it should be re-installed in a weatherproof enclosure to minimise further deterioration. With delays occasioned by the Covid pandemic, it wasn't until 2022 that the statue could be returned to the site.

When it was, it came protected by a splendid transparent enclosure, designed by Ian Williams of PRC Architecture and Planning, and constructed by Aquarium Technology Ltd. The result has been praised by all who have seen it. The statue was installed within the site by MCS Group, to the right of the main entrance in Cross Oak Lane.

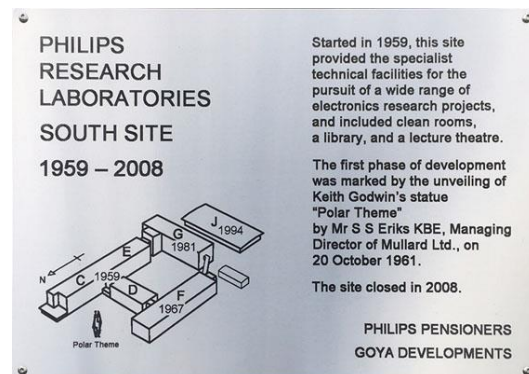


We are very grateful to Goya and RBBC for their help in keeping Polar Theme where it belongs, and we hope it will be in place for many years to come.

In June 2023, the PRL retirees arranged for a stainless-steel plaque to be located by the statue, commemorating the history of the south site. This is a companion to a similar plaque they installed on the north site in 2018, with the welcome support of Titan Travel. Both were designed by David Paxman and Phil Lloyd, and fabricated by Graham Baker.



PRL north site plaque



PRL south site plaque

In 2021, Titan relocated to Crawley, and the north site was purchased by Salmon Developments who, following Goya's example, applied to clear the site and build warehouses there, though only two. However, although the buildings were demolished (but the spoil not removed) no further progress had been made as of September 2023.

Keith Godwin ARCA, RBA (1916 – 1991)

The sculptor's own biographical notes provided for the competition state:

"Sculptor in plaster, cement, terra-cotta, stone, wood and resins (polyester). Born Warsop, 17th April 1916; son of Frederick Fuller Godwin, miner; married Mary Holloway; two sons; Educ: Brunts School (Mansfield); studied art at Mansfield Art School (1934-35), Nottingham College of Art (1935-36), Leicester College of Art (1936-39), RCA under Frank Dobson (1940-41) and (1946-48). Exhib: RA, RBA, RSA, London Group, Cooling Galleries, Arts Council, Brighton. Official purchases: Festival of Britain, ICI, sculpture for Estate Ham Common, Stratford Grammar School. Work repro: Architectural Review, Illustrated London News."



These further notes are provided by David Paxman:

"Keith Godwin was one of number of young artists who really started work during the Festival of Britain in 1951. These included Barbara Hepworth, Henry Moore, and Hugh Casson. Godwin was involved in the Scottish part of the Festival, making a huge, 52 x 21ft, bas relief structure representing a coal mine. He was Head of Art at Hammersmith College of Art when he produced "Polar Theme". Subsequently he moved to Manchester Polytechnic, becoming Head of Fine Arts in 1979. He was President of the Manchester Academy of Fine Arts, which presents the Keith Godwin Sculpture Award to a young sculptor, in his memory.

Most of his work is to be found in the Manchester area, but there are some pieces in the London area. During 1958 he was associated with the SPAN housing developments planned by Eric Lyon and Hugh Casson. These very advanced private housing estates usually had a central garden which was an ideal setting for works of art. Godwin produced at least two sculptures, one of which is in Blackheath – a small, crushed figure illustrating the burdens faced by the developer Eric Lyon. There is also a mural depicting Diana and Neptune at the junction of Half Moon Street and Piccadilly, opposite Green Park. His sculptures were also displayed in the Imperial War Museum, London, and the Red Army Museum, Moscow.

In spite of much searching, I have been unable to find any depiction of "Polar Theme", but it is clear that in the 1960s vertical structures were very much in vogue, with similar items from Hepworth, Moore etc. The PRL statue is a particularly good example of the genre, having a clearly defined theme. It would be interesting if it were possible to locate the original maquette which may be stored away in some university archive. The search continues."

Acknowledgments

I would not have been able to compile the above history without the input from Gordon McGinty and David Paxman. "The Mullard/Philips Research Laboratories, Redhill – A Short History 1946 – 2002" by John Walling (who was deputy director at PRL) has also been a source of helpful information.

Phil Lloyd September 2023

Appendix – The Other Nine Entries

Each of the other nine submissions is shown here, with the sculptor's name and either the title for the work or what it depicts. They are mostly organic in nature, and the winning entry does stand in contrast to them as appearing more "technical/scientific". Perhaps the judges' choice was not a difficult one?



**Thomas Bayliss
Huxley-Jones**
(Untitled)



Astrid Zydower
Depicts "Two People
Sheltering from Lightning"



Ivor Roberts-Jones
"Storm and Flame"



Ralph Brown
Depicts "Searching, Finding,
Exploring etc."



Sydney Harpley
(Untitled)



Elizabeth Frink
"Figure in Space"



Anthony Hatwell
Depicts "The conflict between
man and nature"



Stephen Cohn
Depicts "A Hydra of
Communications,
Calculations, and Computers"



John Wragg
(Untitled)