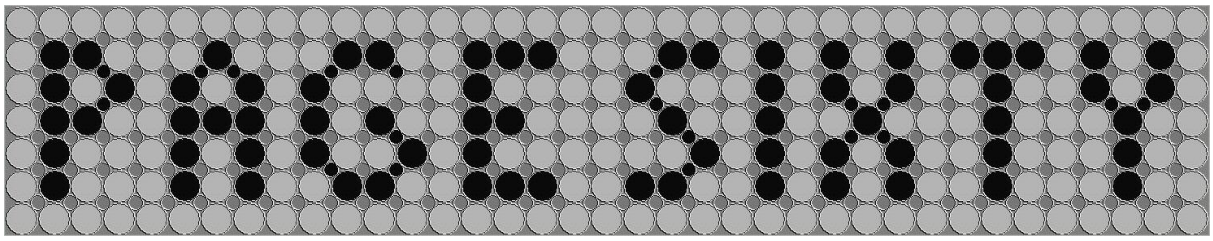


BULLETIN OF THE COMPUTER ARTS SOCIETY SPRING 2005

STEPHEN WILLATS: An Interview on Art, Cybernetics and Social Intervention

George Mallen

Background

Stephen Willats is an artist whose works have explored new dimensions of the relationship between artist, audience and society. He has pursued the idea that the real function of art is to be a catalyst for changing thinking, the artist preferably anonymous and certainly working outside the conventional galleries framework. His works span a wide range - writings (he started and still publishes Control Magazine, his books include "Art and Social Function"), drawings, constructed electronic and interactive pieces and the important social or community projects. An exhaustive listing of his works is at www.lumentravo.nl/bio/stem.htm

His early work did not use computers as such though he built his own special purpose devices to control his electronic pieces and the large-scale interactive works. His social project for the Computer Arts Society's INTERACT exhibition in Edinburgh in 1973 did however use a very early portable teletype terminal for the street interviews carried out in Leith and Edinburgh. This was highly innovative in those days.

My interest in Stephen's work stems from his intuitive response to the complex issues linking art, technology and the artist's social roles, and his ability to move these forward through insight, technical capability and a broad social comprehension. I was trying to address such issues through the lens of science and had been impressed by the apparent solidity and confidence of his "way of knowing".

The Cybernetic 60s

Stephen and I are both uncertain when we first met. It was probably 1965 or 1966. At that time I was working in Gordon Pask's research company System Research Ltd (see www.pangaro.com/Pask-Archive/) and Stephen, having finished the ground course at Ealing School of Art some years earlier, was digging into the ideas of cybernetics which had been introduced to the Ealing School in a seminal lecture by Gordon Pask in 1963. That lecture deeply influenced the staff there including Roy Ascott, the Cohen brothers, Bernard and Harold and R J Kitaj. They began to try to use the ideas from cybernetics as a base from which to create a new approach to art and art education. Stephen remembers coming to System Research Ltd in Richmond several times in the mid 60s and it must have been during one of these visits and the inevitable and absorbing seminar discussions with Gordon that we met.

The ideas trajectories which brought us together couldn't be more different. I had come from the world of big science and computing at the Royal Aircraft Establishment, Farnborough and joined Pask's company in the pursuit of using digital simulation to model thought processes. I was working up simulation models of human learning and developing ways to study decision behaviours for a Home Office study on crime intelligence systems. I knew little of the fine art world. Stephen had come from a self-taught art background through working in a London gallery and being exposed to the arguments and discussions about the role of art in the post-war, cold war world. The pervasive sense of failure, that somehow or other the great achievements of European art, by many assumed to be the pinnacle of human culture, had counted for nought when the great social catastrophes of the 20th century unfolded. Perhaps the art world had been fatally separated from the society it sought to represent and serve? Into this debate came the technical optimism of the cybernetics school: Gordon Pask was a particularly able propagator of that optimism. It is not difficult to imagine the impact of his ideas on a group of artists who were seeking a new beginning and would see, in the multiple disciplines and their interactions, an opportunity to synthesise a new approach, and particularly one that could use the concepts of feedback and complex systems to create a concept of interaction which would ensure the artist's close involvement with their subjects and their society. For Stephen this meant learning to make electronic machines to explore perception and interaction and developing methods and work which put the artist in direct contact with social groups hitherto excluded from the gallery world of art. Hence his visits to System Research Ltd during the time I was there.

,,,,,,.....

CONTENT

From that time and through the 70s I got to know Stephen's work by participating in some of his projects and involving him in Computer Art Society projects, particularly the INTERACT exhibition in Edinburgh in 1973. I was then, and still am, fascinated by the intuition, methods and commitment he brings to his work.

An interview

Now some 40 years after our first meeting this interview was designed to let Stephen recount and reflect on how his art has evolved. The interview was on Wednesday 2 February 2005 at my office in Covent Garden.

GM - Stephen, you arrived in London in the late 50s, a teenager without much connection to the art world, how did you get started?

SW - I was looking for work and, by chance, came across the Drian Gallery and was offered a job as the gallery assistant, essentially doing odd jobs and reception duties. The gallery, run by Halina Nalecz was exploring a very experimental arts agenda. Halina was part of the new avant garde of the time. Wittgenstein had died and several of his followers at Cambridge came to the gallery and there were discussions between them and artists about the basic functionality of art. These kinds of discussion were at the beginning of conceptual art. In fact there were very few visitors to the Drian Gallery and I had plenty of time to sit by the door thinking. I began to make notebooks and question about why people went to or didn't go to galleries. I was just 16 at the time but began to grasp that in the conventional artist-gallery-viewer model the viewer was usually seeking some kind of certainty, some kind of verification of their cultural being. I began to wonder what would happen if you introduced a random variable which upset their model of certainty.

After a year or so at the Drian Gallery, myself and a group of constructivists had the idea to set up a centre that brought together artists, philosophers and mathematicians, in Andrew Hudson's flat in Gloucester Terrace to explore such ideas. But it attracted no attention, the realm of art was too small, too narrow, too critical of the new attitude and approach towards culture that was rejecting the confined taboos of the 1950s. Then I went to work for Dennis Bowen at the New Vision Centre Gallery, a rival to the Drian. He mounted some fantastic shows, well outside the normal, shocking the establishment - Manzoni's cans of shit, that sort of thing.

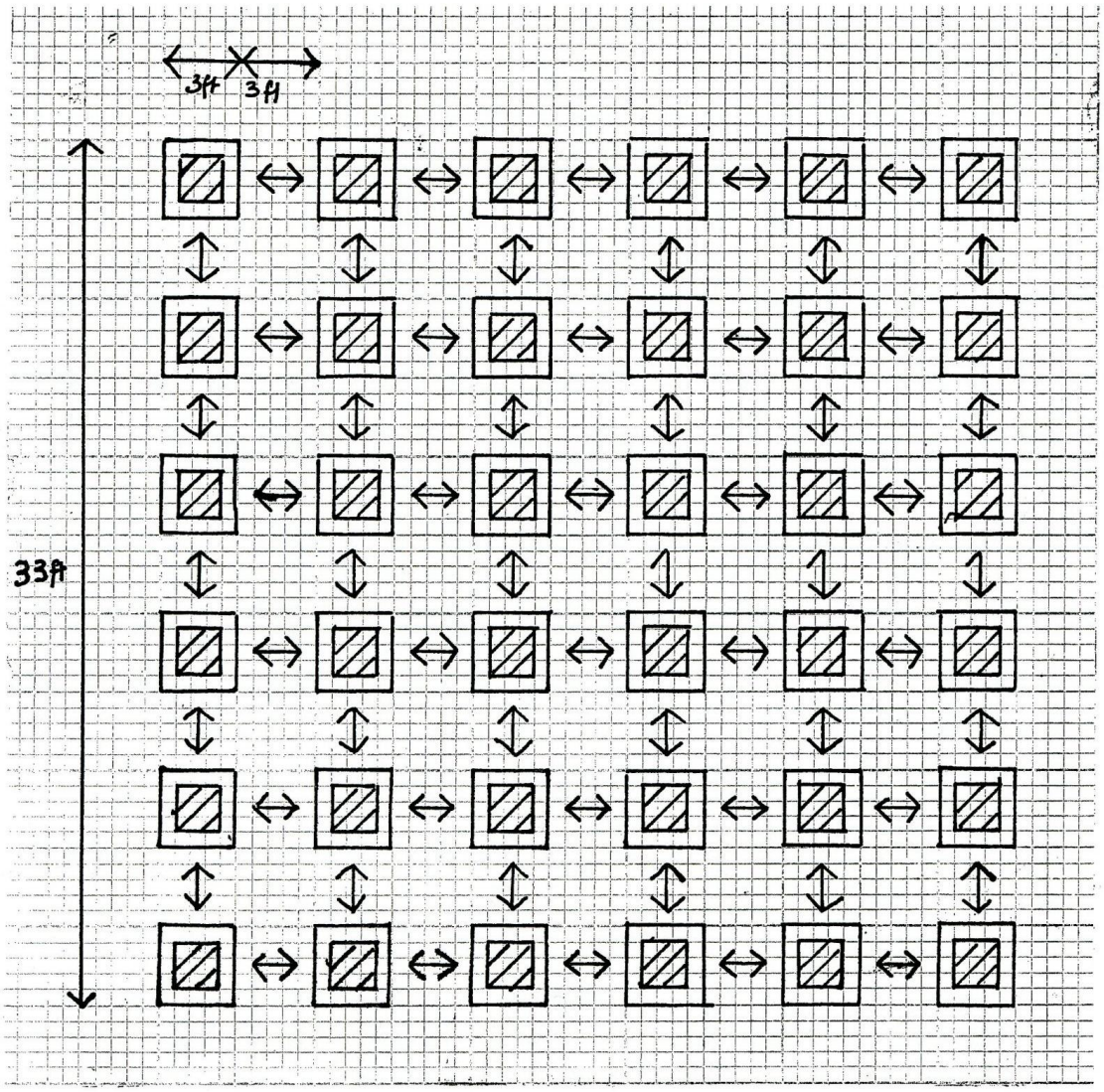
By this time I had made some works and was beginning to see myself as an artist but in the existing gallery system. Then Dennis told me about an experimental course at Ealing School of Art run by Roy Ascott. At that time art schools were trying to keep abreast of the push to better and broader higher education standards; technical colleges were growing and some becoming Polytechnics. Art schools needed radical thinkers to get them to Dip AD status. What emerged at Ealing was a kind of think tank based on the Chicago Institute, Moholy-Nagy, Bauhaus approaches. The initial approach was "dexterity in media": by handling different materials you would find out what you wanted to do. But Ascott introduced a fundamental switch "Theory should precede practice". The artist should decide what he/she wanted to do and not flounder around in a process of trial and error. To help decide what to do people were encouraged to look around at different fields.

GM - This was a time of interdisciplinary ferment - the cybernetics period, engineers, biologists, psychologists, neuroscientists all coming together round the ideas of feedback and self-organising systems and computing. Also of Harold Wilson's "white heat of the technological revolution" and a general urge to improvement and progress.

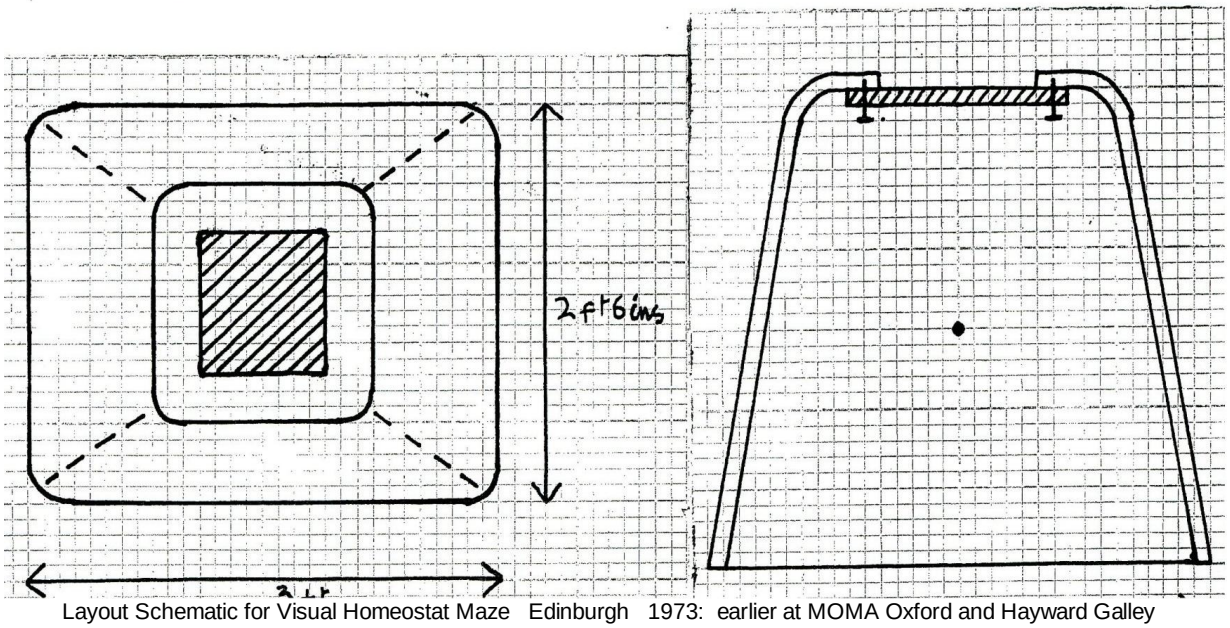
SW - Yes, Gordon Pask gave a seminal presentation on cybernetics in 1963 which had a big effect on staff and students and led Ascott and others to begin to formulate a new arts agenda based on concepts of feedback and complex systems. There were about 20 staff and 20 students and somehow we saw feedback as a unique concept. Pask's lecture, and a similarly influential seminar by Basil Bernstein, I think were the second major influences on me as an artist. Staff at Ealing got highly motivated, locked themselves in a studio and set down notational schemes and theories. I think I came to realise the importance of the audience as an important part of a loop connecting artist, work and audience. How would they receive ideas and representations? Also I had come across ideas on brain alpha rhythms and read about Grey Walter's work on robot turtles.

GM - Was this what took you into electronics?

SW - Yes, there were all these shops down the Edgware Road selling surplus stuff. I made two pieces where I tried to put the viewer in a behavioural situation where I tried to randomise the situation and they would have to organise their response to the works. This led to the "Shift Box" with lights going on and off. This series of "visual automatics" work was highly pragmatic, there was no aesthetic, just starting the conception of the work from zero with the fundamental relations of artist, work and audience. I then began to look at advertising as multichannel communication and made a virtual reality booth. I also made a series of manual variable constructions where the viewers were presented with questionnaires and the responses would be shown next to the exhibits, which were based on learning theory. Idea was to show the transformation of



VISUAL HOMEOSTATIC MAZE. LAYOUT OF ELEMENTS.



Layout Schematic for Visual Homeostat Maze Edinburgh 1973: earlier at MOMA Oxford and Hayward Galley

their self-organisation as they responded to the works. But couldn't get an exhibition of this work, it was frustrating. I was in contact with artists like Gustav Metzger, John Latham, William Green - the underground. This was 62 - 63. These visual automatics, alpha rhythm perceptual works, gave rise to the feeling that the conventional role of the artist was redundant and inappropriate to this cybernetic world and, for a time I renamed myself as "conceptual designer", trying to change the inner fabric of society, with vehicles for people to transform their self-organising potential, and I saw, for example, furniture and clothing as means whereby they could do this. It was then, in 1963, that I set up Control magazine, which was intended to provide a new framework which would help artists define the framework within which they could operate.
GM - So you were moving away from a simple concept of artist and the work into something very much more complex, to do with social functioning.

SW - Well yes, I was running around the art world at openings, handing out my manifestos criticising contemporary art, typed up on an ancient typewriter. I was shown the door more than once but at one, I don't know if it was just spur of the moment, Roy Ascott offered me a job teaching at the Ipswich School where he'd ended up after Ealing. This was to teach my own course for a year and was a phenomenal opportunity.

When I got there in early 1965 I found the students quite naïve but very open to new ideas. I set up collaborative projects, that is everything had to be done as a group, no individual work, I would present a paper, for example on the concept of feedback, which they would try to make into projects. I took the students outside the college to talk to people and set up events. Eventually I had four groups each developing their own strategy. These were in an overspill housing estate and trying to develop the idea that a work of art could be made outside, in a community, but it would need to use language, going back to Basil Bernstein ideas, that was meaningful to the audience, finding contexts they could access. So we set up ways to find language that was meaningful using questionnaires with open questions - draw something, make a plan, describe etc. not yes/no. One outcome was a set of sign posts on the estate developed in the language of the group of people. The sign posts stayed there and weren't pulled down, fell down after a few weeks. Another project was a group designing an ideal painting for a target audience. They then made the painting, which was then loaned round the group to have in their homes.

But then Ipswich was closed - too radical!

GM - It must have been after that that you were toing and froing to System Research Ltd, 66 - 67, and our paths crossed. We were into the more scientific aspects of feedback. We were working on learning processes and using Pask's adaptive teaching machines. Out of that came the conversation theory ideas which were published by Gordon and Bernard Scott in the mid-70s. So we were deeply into the basics of interactive systems.

SW - Yes, I had been coming up to System Research Ltd in Richmond at weekends both as guinea-pig and to test things and met yourself. Fantastic atmosphere for me. Also met Christopher Evans of NPL and made contact with his ideas on human computer interaction. I certainly became more electronics and interaction orientated. This led, in the early 1970s, to me working with Derek Aulton, a professional electronics engineer who helped me build the Visual Metalanguage simulation and Metafilter projects.

I read Ross Ashby's ideas on homeostasis and tried to create a work which would show self-organisation in groups of people. Looking back it's clear that ideas and philosophy were in advance of technology so it was difficult to make the hardware to realise the ideas. But the Visual Homeostatic Information Mesh went some way. 75 ft long it tried to elicit co-operative modes of behaviour from the visitors. It was a vast piece developing ideas of dynamic simulation/reality transformation of perceptions through simulation. It made a connection between self-organisation, problem solving and language, going back to Bernstein's ideas. But I was building things bit by bit and I built the Visual Homeostat Information Mesh, which was installed at the Hayward Gallery. I was developing ideas of simulating a dynamic reality, trying to create co-operative modes of behaviour. Dale Lake wrote an influential paper connecting these kinds of ideas and socialist ideology.

GM - I think we were both onto the same thing here. I was working with the Computer Arts Society in 1969/70 on the development of Ecogame. This was, as far as I know, the first computer controlled interactive multimedia game. It was implemented in London and in Davos at the first European Management Forum. It also sought to illustrate the comparative value of co-operation as against competition in a macro-economic situation.

SW - This certainly interested me and led on to several things. The Nottingham project "Man from the 21st Century", which you had a hand in. But the project stopped when it became clear the Polytechnic had problems with what I was doing and I decided I had to stop teaching. But the Visual Metalanguage simulation piece was about co-operation and competition interaction and it was very successful. After Hayward it was in the Museum of Modern Art in Oxford, then to the Computer Art Society's INTERACT in Edinburgh. It was pretty well hammered to death. But these pieces were based on what I called the phenomenological approach from the 60s. I then moved on to trying to show that a work of art could work in any environment.

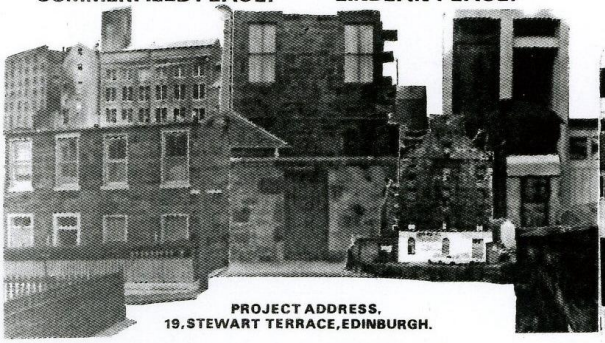
SOCIAL MODEL CONSTRUCTION PROJECT

PROJECT DATES, AUGUST 25th - 31st.

THE SOCIAL MODEL CONSTRUCTION PROJECT IS AN ART WORK THAT ENABLES PEOPLE RESIDENT IN FOUR AREAS OF EDINBURGH TO ARTICULATE THE WAY THEY PERCIEVE AND UNDERSTAND CONVENTIONS THAT DETERMINE PEOPLES RELATIONSHIPS TO EACH OTHER. PARTICIPANTS IN THE PROJECT ARE GIVEN A SERIES OF TASKS WHICH CONSIST OF DEVISING AND RECORDING SOLUTIONS TO PROBLEMS CONCERNED WITH HOW THEY SEE PERSON TO PERSON INTER-ACTION. THE SOLUTIONS TO THE PROBLEMS ARE FED INTO A COMPUTING SYSTEM THAT FORMULATES NEW PROBLEMS FROM THEM, AND THESE ARE THEN GIVEN TO PARTICIPANTS. THIS LOOP PROCESS OCCURS EACH DAY FOR FIVE DAYS. AS THE BASIS OF THE PROBLEMS USED IN THE PROJECT IS DETERMINED BY THE SOLUTIONS TO PROCEDING ONES IT IS ENVISAGED THAT A LEARNING PROCESS WILL EVOLVE IN A SELF-DETERMINED HIERACHY OF INFORMATION, THE CONTENTS OF WHICH GRADUALLY BECOME MORE MEANINGFUL AND RELEVANT TO PARTICIPANTS AS IT PROGRESSES. PUBLIC MONITORS HAVE BEEN SET UP TO DISPLAY PARTICIPANTS SOLUTIONS TO THE PROBLEMS THEY HAVE BEEN GIVEN. THE NEAREST PUBLIC MONITOR TO THIS PROJECT AREA IS AT.....

PROJECT AREA ONE

COCHRANE PLACE.
PARKVALE PLACE.
ROSEVALE PLACE.
SUMMERFIELD PLACE.
FINGZIES PLACE.
ELM PLACE.
NOBLE PLACE.
LINDEAN PLACE.



PROJECT ADDRESS,
19, STEWART TERRACE, EDINBURGH.

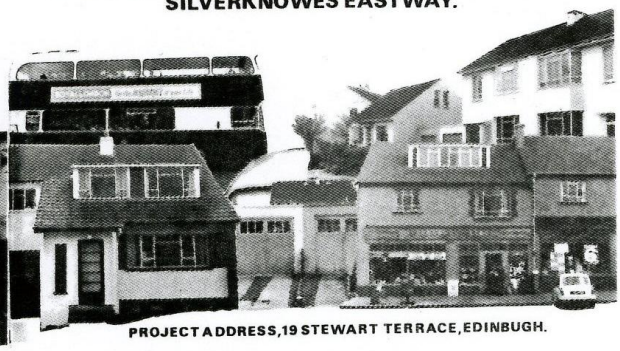
SOCIAL MODEL CONSTRUCTION PROJECT

PROJECT DATES, AUGUST 25th - 31st.

THE SOCIAL MODEL CONSTRUCTION PROJECT IS AN ART WORK THAT ENABLES PEOPLE RESIDENT IN FOUR AREAS OF EDINBURGH TO ARTICULATE THE WAY THEY PERCIEVE AND UNDERSTAND CONVENTIONS THAT DETERMINE PEOPLES RELATIONSHIPS TO EACH OTHER. PARTICIPANTS IN THE PROJECT ARE GIVEN A SERIES OF TASKS WHICH CONSIST OF DEVISING AND RECORDING SOLUTIONS TO PROBLEMS CONCERNED WITH HOW THEY SEE PERSON TO PERSON INTER-ACTION. THE SOLUTIONS TO THE PROBLEMS ARE FED INTO A COMPUTING SYSTEM THAT FORMULATES NEW PROBLEMS FROM THEM, AND THESE ARE THEN GIVEN TO PARTICIPANTS. THIS LOOP PROCESS OCCURS EACH DAY FOR FIVE DAYS. AS THE BASIS OF THE PROBLEMS USED IN THE PROJECT IS DETERMINED BY THE SOLUTIONS TO PROCEDING ONES IT IS ENVISAGED THAT A LEARNING PROCESS WILL EVOLVE IN A SELF-DETERMINED HIERACHY OF INFORMATION, THE CONTENTS OF WHICH GRADUALLY BECOME MORE MEANINGFUL AND RELEVANT TO PARTICIPANTS AS IT PROGRESSES. PUBLIC MONITORS HAVE BEEN SET UP TO DISPLAY PARTICIPANTS SOLUTIONS TO THE PROBLEMS THEY HAVE BEEN GIVEN. THE NEAREST PUBLIC MONITOR TO THIS PROJECT AREA IS AT.....

PROJECT AREA FOUR

SILVERKNOWES ROAD.
SILVERKNOWES GDNS.
SILVERKNOWES GROVE.
SILVERKNOWES PLACE.
SILVERKNOWES COURT.
SILVERKNOWES BANK.
SILVERKNOWES EASTWAY.



PROJECT ADDRESS, 19 STEWART TERRACE, EDINBUGH.

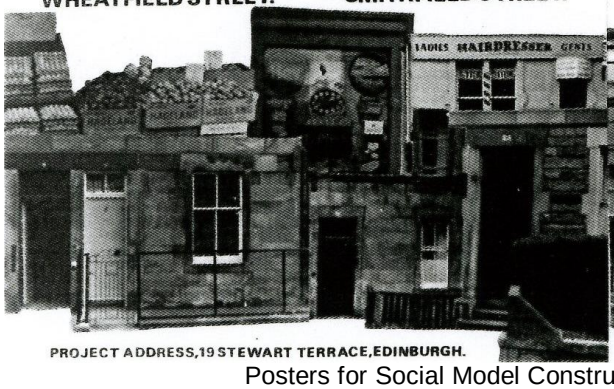
SOCIAL MODEL CONSTRUCTION PROJECT

PROJECT DATES, AUGUST 25th - 31st.

THE SOCIAL MODEL CONSTRUCTION PROJECT IS AN ART WORK THAT ENABLES PEOPLE RESIDENT IN FOUR AREAS OF EDINBURGH TO ARTICULATE THE WAY THEY PERCIEVE AND UNDERSTAND CONVENTIONS THAT DETERMINE PEOPLES RELATIONSHIPS TO EACH OTHER. PARTICIPANTS IN THE PROJECT ARE GIVEN A SERIES OF TASKS WHICH CONSIST OF DEVISING AND RECORDING SOLUTIONS TO PROBLEMS CONCERNED WITH HOW THEY SEE PERSON TO PERSON INTER-ACTION. THE SOLUTIONS TO THE PROBLEMS ARE FED INTO A COMPUTING SYSTEM THAT FORMULATES NEW PROBLEMS FROM THEM, AND THESE ARE THEN GIVEN TO PARTICIPANTS. THIS LOOP PROCESS OCCURS EACH DAY FOR FIVE DAYS. AS THE BASIS OF THE PROBLEMS USED IN THE PROJECT IS DETERMINED BY THE SOLUTIONS TO PROCEDING ONES IT IS ENVISAGED THAT A LEARNING PROCESS WILL EVOLVE IN A SELF-DETERMINED HIERACHY OF INFORMATION, THE CONTENTS OF WHICH GRADUALLY BECOME MORE MEANINGFUL AND RELEVANT TO PARTICIPANTS AS IT PROGRESSES. PUBLIC MONITORS HAVE BEEN SET UP TO DISPLAY PARTICIPANTS SOLUTIONS TO THE PROBLEMS THEY HAVE BEEN GIVEN. THE NEAREST PUBLIC MONITOR TO THIS PROJECT AREA IS AT.....

PROJECT AREA THREE

WARDLAW STREET.
WARDLAW TERRACE.
WHEATFIELD STREET.
WARDLAW PLACE.
STEWART TERRACE.
SMITHFIELD STREET.



PROJECT ADDRESS, 19 STEWART TERRACE, EDINBURGH.

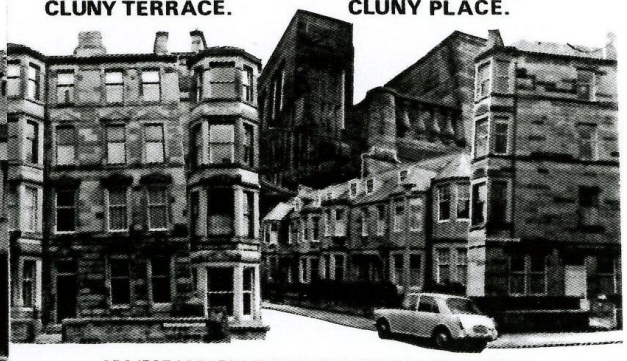
SOCIAL MODEL CONSTRUCTION PROJECT

PROJECT DATES, AUGUST 25th - 31st.

THE SOCIAL MODEL CONSTRUCTION PROJECT IS AN ART WORK THAT ENABLES PEOPLE RESIDENT IN FOUR AREAS OF EDINBURGH TO ARTICULATE THE WAY THEY PERCIEVE AND UNDERSTAND CONVENTIONS THAT DETERMINE PEOPLES RELATIONSHIPS TO EACH OTHER. PARTICIPANTS IN THE PROJECT ARE GIVEN A SERIES OF TASKS WHICH CONSIST OF DEVISING AND RECORDING SOLUTIONS TO PROBLEMS CONCERNED WITH HOW THEY SEE PERSON TO PERSON INTER-ACTION. THE SOLUTIONS TO THE PROBLEMS ARE FED INTO A COMPUTING SYSTEM THAT FORMULATES NEW PROBLEMS FROM THEM, AND THESE ARE THEN GIVEN TO PARTICIPANTS. THIS LOOP PROCESS OCCURS EACH DAY FOR FIVE DAYS. AS THE BASIS OF THE PROBLEMS USED IN THE PROJECT IS DETERMINED BY THE SOLUTIONS TO PROCEDING ONES IT IS ENVISAGED THAT A LEARNING PROCESS WILL EVOLVE IN A SELF-DETERMINED HIERACHY OF INFORMATION, THE CONTENTS OF WHICH GRADUALLY BECOME MORE MEANINGFUL AND RELEVANT TO PARTICIPANTS AS IT PROGRESSES. PUBLIC MONITORS HAVE BEEN SET UP TO DISPLAY PARTICIPANTS SOLUTIONS TO THE PROBLEMS THEY HAVE BEEN GIVEN. THE NEAREST PUBLIC MONITOR TO THIS PROJECT AREA IS AT.....

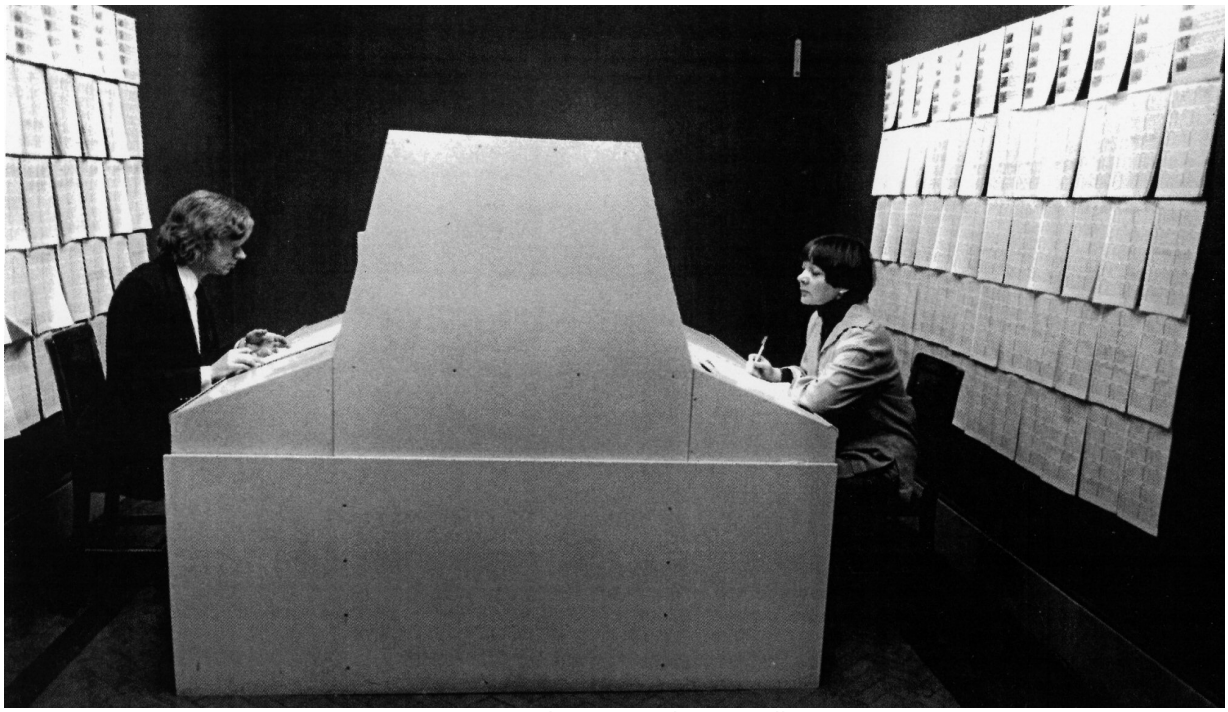
PROJECT AREA TWO

WOODBURN TERRACE.
NILE GROVE.
CLUNY TERRACE.
BRAID AVENUE.
CLUNY AVENUE.
CLUNY PLACE.



PROJECT ADDRESS, 19 STEWART TERRACE, EDINBURGH.

Posters for Social Model Construction Project Edinburgh 1973



METAFILTER Southampton City Art gallery 1978

The Social Resource project in Nottingham aimed to get people to remodel the game of tennis. I was teaching at Nottingham at that time, 71/72. People from four different tennis clubs agreed to participate, filled in questionnaires, took photographs, participated in discussions and ended with a kind of tennis tournament. But then I was working on new project ideas. Looking back the two main projects were the Edinburgh Social Modelling project done at INTERACT and the West London Social Resource project. The Edinburgh Project used this core of a computer programme developed by Stuart Pound of the Society for Social Responsibility in Science. Project used four groups to look after different neighbourhoods, took response sheets to neighbourhoods which were filled in then brought back and processed overnight by an ICL computer in Dalkeith. Then we developed the next set of questions from the previous responses. Xeroxed these and distributed them again. Stuart used an early portable terminal in Princes Street and people could interact with the questions over an acoustic coupler. I still have printouts. The archive for the Edinburgh project is at the National Gallery of Modern Art, Edinburgh. The next hardware project, Metafilter, took another strategy where the audience has to acquire the language of the piece, there are no preset concepts of good or bad, right or wrong, and the realisation that the work of art was not the product of any one person. This was a bit heretical at the time.

GM - But that's your continuing theme isn't it, that a work of art is a social construction? You were the conductor orchestrating the work.

SW - Yes, but as I said, I moved away from the strategy of the social responses in specific contexts to more self contained pieces such as Metafilter. This used photography and photo montages to try to get participants to build a model of society through agreement. As part of this process they had to acquire the languages, visual and other, needed to interact successfully. This was first set up above a taxi office in Lisson Street in London. Subsequently Metafilter became a historic piece and had its own life. It's now in the Contemporary Art Museum in Lyons in France, translated into French and with its own dedicated curator who makes sure it still works, probably better than I ever did.

GM - where would be best place to point a student if he wanted to research Metafilter?

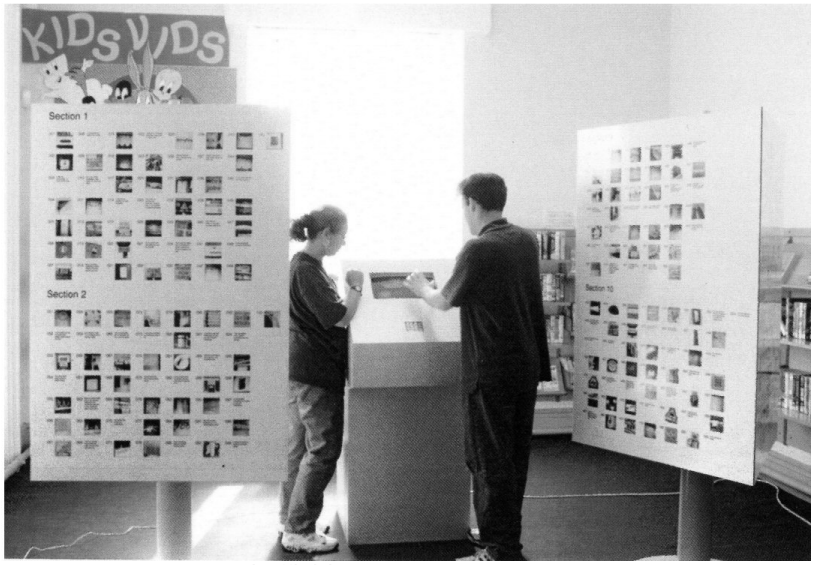
SW - The Tate has an archive of the photographs and scripts from Metafilter implementations. These are the photos, montages, tapes of participants' interactions with it. But also comments by external advisers - I think you were one: it's quite a substantial archive.

GM - After Metafilter we're into the 80s and we went our separate ways. I was immersed in family and running the company. Where did you go?

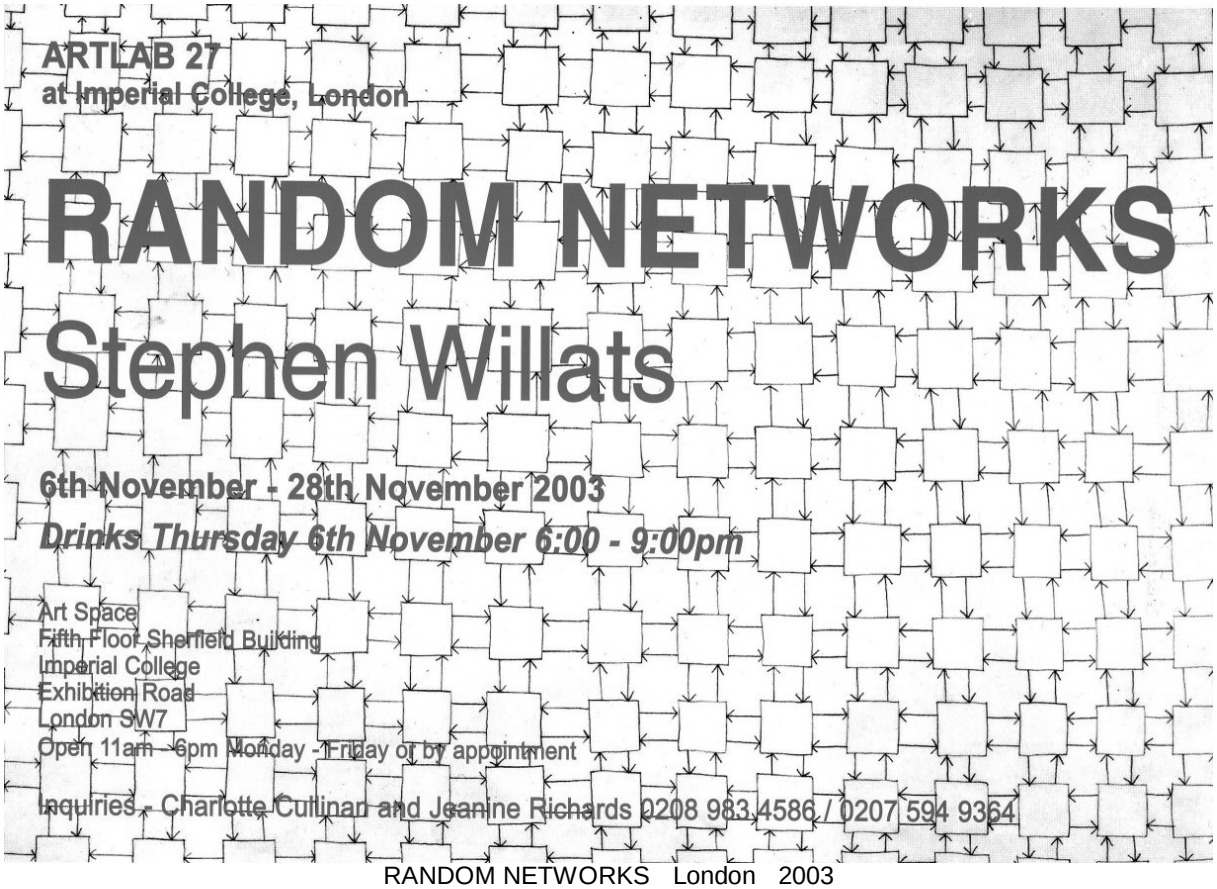
SW - Well, I went to Berlin working there for several years, continuing to develop my ideas in a complete variety of mediums and expressions, which I have continued to the present day. Many of the ideas I developed in the 60s and 70s have been revisited and amplified in works created in the last decade or so. Computer simulation works such as, for example, "Freezone" (1997), Creativeforce (1998) and in the works made with residents of Tower Blocks in Liverpool that was entitled "Meeting Of Minds" (2003). I think the big

difference now is that technologies available today can begin to match the aspirations of the ideas and visions posited by the artist.

GM - Well thanks Stephen, I've found that a most instructive excursion and I will follow up your current work from which I hope we'll have many more fruitful discussions.



CREATIVEFORCE Sheffield 1998



RANDOM NETWORKS London 2003

Willats Archive

The Stephen Willats Printed Archive is held by the National Art Library at the Victoria & Albert Museum, Cromwell Road, London SW7 2RL, tel 020 7938 8315. The Library is open 10.00 - 17.00 Tuesday to Saturday. For details of the archive consult the computer catalogue terminals (OPACs) in the Library.

Robin Shirley 1941 - 2005

Robin Shirley died on Sunday 27 March 2005, peacefully with members of his family at King's College Hospital, London. Robin was a Research Fellow in Information Systems at the University of Surrey in Guildford, teaching statistics and scientific method to psychology students. In November 2004 he went to Egypt to speak at a conference and it seems that he caught Hepatitis A there from infected food or drink. Back in this country the symptoms began to show by the end of the year, and late in January he was taken to hospital. In the end he caught a form of MRSA.

In earlier years at Surrey Robin's main work was in crystallography and he remained active in this subject, for example looking after CRYSFIRE, a public software system he wrote which produces structural information from diffraction data on powders.

Within the Computer Conservation Society (CCS), Robin was chairman of the Working Party on the S100 bus, an early *de facto* bus standard which had 100 lines.

Throughout his life Robin wrote poetry, often using imagery from space and science fiction. Around 1968 he wrote his first program for computer-assisted poetry. This brought him into the early Computer Arts Society and on 4 May 1969 he gave the first CAS public talk, *How to write a Computer Poem*, helped by fellow poet and performer Spike Hawkins, at the ICA in London. This made his the first name to appear in the first issue of PAGE. The front of PAGE 25 in October 1972 is devoted to his poem DUNE TUNE and his article *Poet and Program*. At INTERACT in Edinburgh, 1973, Robin performed, as he often did, with Gus Garside and Ranald Macdonald, singing and declaiming poems with instrumental accompaniment. Several of his poems appear in the INTERACT brochure.

Again, when the CAS was re-formed around the end of 2003, Robin was one of the first to join the committee, and contributed greatly to the project, becoming vice-chairman. In March 2004 he spoke at a joint CCS and CAS meeting at the Science Museum, London, with three other members of CACHe and CAS. *Computers, Poetry and the Nature of Art*, his 1973 paper for INTERACT, is reprinted in PAGE 57 with a 2004 footnote.

He will be greatly missed, and fondly remembered for his insights, his poetry and performances, his forthright manner, his good humour and his enthusiasm.

Alan Sutcliffe

There will be a longer article about Robin's life and work in PAGE 61.

Robin Shirley at the 1972 Free Festival

Photo by Fred Pipes

From **ICEWORLDS**

Iceworlds
Haunted by the legend of planets
Arctutus Andromeda Vega
Orbiting

Lost among stardust
Through eons of crystal
Your seed has dispersed
Lit by the jewels of infinity
In time with the measured dance of the universe

Orbiting
I am a child of eternity
Mars Venus Jupiter Saturn
I am a child of eternity
On a journey to no destination

Robin Shirley

DUNE TUNE

Leaving no footprints on water she sleeps with shadows
prescience passed future
Starlike in youth dunelike in age freedom is hers
Spacespectre walking on planets undreamed of
her eyes sing fire melodies

Essence of dreams
Walking on planets undreamed of she awaits the return of waves
She remembers no one
Essence of dreams parted in some long forgotten seed
her eyes sing fire melodies

Born of a universal stalemate
joining joy with repose a time for inconsequence
My freedom is hers
Walking on planets undreamed of leaving no footprint on water
her eyes sing fire melodies

Clutching at dreams I whisper her name
clutching at dreams her name
dreams clutching her name her I dream
dreams I dream clutching at clutching her
clutching at her dreams

Gus Garside and Robin Shirley

Editorial? Art in *Nature*

Artists on Science: Scientists on Art is a 32-page feature in the 17 March 2005 issue of *Nature*, the world's premier journal of science. Nine essays, such as A S Byatt on the importance of science in some of her novels; Martin Kemp, Professor of Art History at Oxford University and a regular contributor to *Nature*, writing that "shared intuitions drive the persuits of artists and scientists"; Robert Zattore on what music can teach us about brain functions. In all, absorbing aspects of the many connections between sciences and arts. Technology should be included in such discussions

"Scientist" and "Artist" are shorthand terms that become labels, and should be avoided. Some contributors work on both sides of this conceptual fence, as do many CAS members. Best to describe someone as working in crystallography or in poetry or in both, undermining the fence not reinforcing it. Just as we are learning not to say a person is disabled but has a disability.

This investigation in *Nature* is a bold and welcome move, even if some contributors to the feature do not question the demarcations. One writer equates art and beauty.

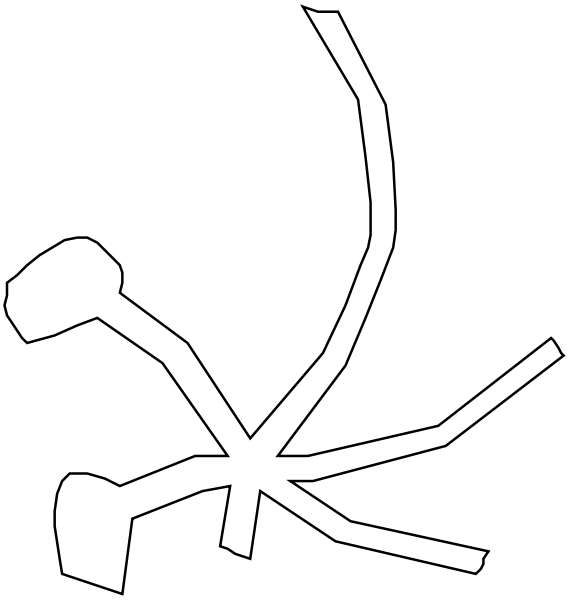
Last year *Nature* started having at the back a one-page science fiction story each week, and this year there has also been a ten-part science and murder mystery, *Schrödinger's Mousetrap*. These literary inclusions may be as much to do with making the journal popular as with promoting understanding, but they must help erode the notion that arts and sciences are mutually exclusive sets.

But there are more differences than custom and narrow-sightedness. In science there are the disciplines of formal review and experimentation. In art there is no refutation, except of what anybody says art is. There are plausible, if not definitive, philosophies of science. It is very hard to find any philosophy of the arts that withstands scrutiny. PAGE would like to hear if you have some.

Starting To Draw Something *Rob Myers*

Early Work

I remember seeing illustrations of Harold Cohen's AARON and Ken Knowlton's EXPLOR in children's computing books that I read when I was growing up in the 1980s. Both made an impression on me, particularly compared to the wireframe aeroplanes and random colour blocks of the more artistic BASIC listings in home computer magazines. Later I remember seeing Richard Dawn's biomorphs, examples of cellular automata, and William Latham's evolutionary artworks on television. But I didn't start to think of programming as a way of making images myself until I was halfway through my art degree at Canterbury in the mid-1990s.



"Spore" part of the series "Blobs" 1994

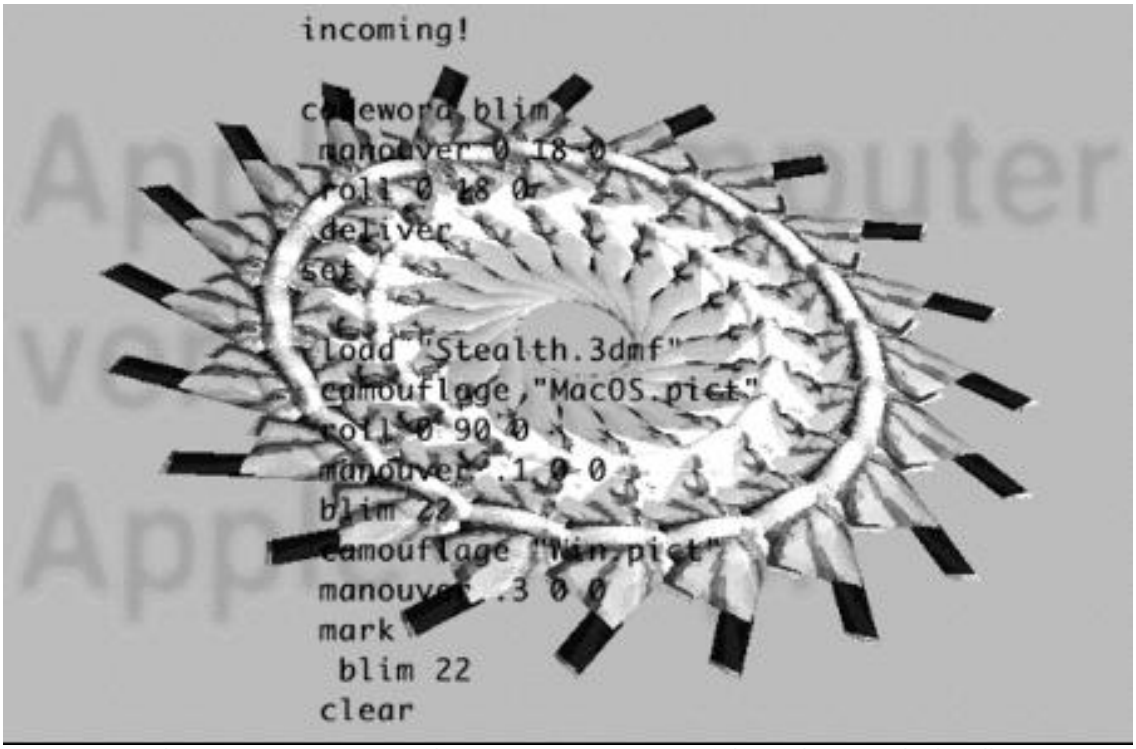
I had been using paintbox systems, then Macs and PCs, to make image remixes and pictographic compositions since the early 1990s (1). Although I was studying fine art, I was influenced by popular graphic design as much as obscure post-conceptualism. My interest in graphic design, and especially in typography, led me to PostScript programming. PostScript was quite a shock after BASIC, although I had encountered a Forth interpreter some years previously so I could just about handle PostScript's backward syntax. I wrote PostScript code that redefined the basic graphics operators of the language to change how images were drawn, intended to be the basis of a PostScript virus that fortunately neither my programming skills nor the average PostScript printer of the time could support.

This work led to an MA at Middlesex University's Centre For Electronic Arts. Having been taught C++ and handed a copy of "War In The Age Of Intelligent Machines" (2) to read I implemented a simple 3D scripting language that read like military jargon to create images parodying William Latham's swirly organic forms, only using stealth bombers texture mapped with computer company logos rather than innocent spheres and abstract textures (3). This combined my interest in image appropriation, in programming, and in the history and ethics of computing into a single artistic project. But both visually and ethically I did not know where to go next.

AARON's Code

By 2003 I felt the need not only to make more art but to make art through programming. I had read Harold Cohen's writings and was fascinated by his drawing (and later painting) program AARON (4). Having worked on Free Software projects as well as porting a large-scale 3D adventure game from PC to Mac, I felt very curious to see AARON's code. I'm certainly not the first person to have asked, and I admire the patience Harold showed in politely declining. Inspired by the information Harold did give, I decided to write my own drawing program and, to put my money where my mouth was, to make it Free Software.

AARON started thirty years ago from a basic question: what was the minimum set of conditions required for a set of marks to serve as an image? My question was slightly different. What is the minimum set of actions a program must perform to be defensibly described as acting artistically?



"Apple Computer versus Apple Corps." 1996 part of the series "Surgical Strike"

Externalising an Internalised Algorithm

Taking my own abstract drawing as a model, I had to work out how and what I drew. Watching oneself draw is very difficult, and seeing why my hand moves the way it does I found almost impossible. But with enough observation I decided that I drew by keeping close, badly, to an optimum distance from an imagined guiding form. I implemented this algorithm over several iterations of the program. With hindsight the algorithm is just a probabilistic wall-following procedure, but the process of understanding and modelling my drawing processes was important as it gave me an insight into the process that just taking an algorithm from the internet would not have.

That was "how". "What" was more problematic, as I needed a simple system to start with. Despite over a decade of making images using illustration software in a way that the lay person would regard as highly controlled and very structured, my visual creativity was a black box to me. Looking back over my work I realised that I had internalised a way of creating images that was based on shape grammars, constructive solid geometry and the "envelope" facilities of illustration software. Whilst this originally came from my use of software, I now drew in this way as well, and it had become my way of thinking of form. Like the human subject of J. David Bolter's "Turing's Man" (5), my human intelligence had become more like the computers I worked with.

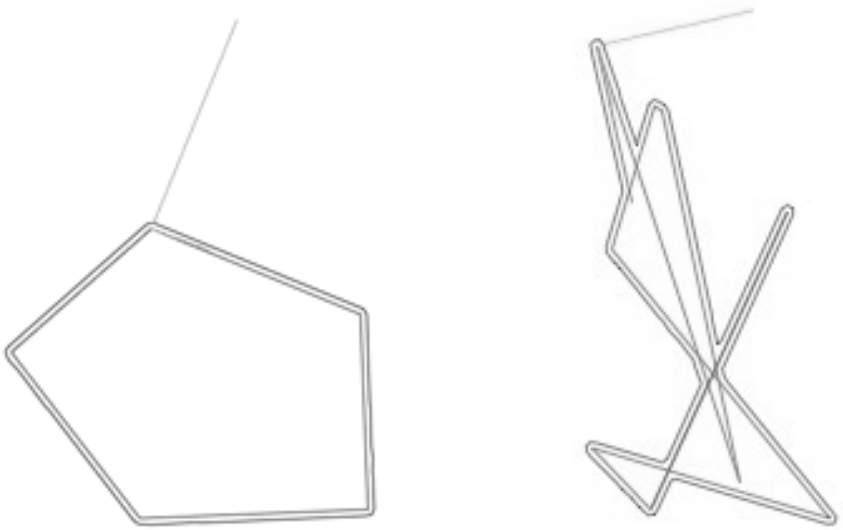
I decided on a strategy of creating a set of points, which would serve as observed or imagined world for the program to perceive. The program would sort these into a convex hull, a modelling or sketching process. It would then use the drawing algorithm to draw an outline around this. The process is similar to AARON's animal drawings from the early 1980s and its later representational images, only much simpler (6).

As the program developed through Prolog, Dylan and then Python versions to its current Lisp implementation it gained a name. Originally it was called "Got To Start Somewhere", indicating my desperation to break through my coding peripatetics, that name came to refer to the program's goal in finding a position to begin drawing. But the name that stuck was "draw-something" (7), which is the name of the Lisp function called to generate the drawing.

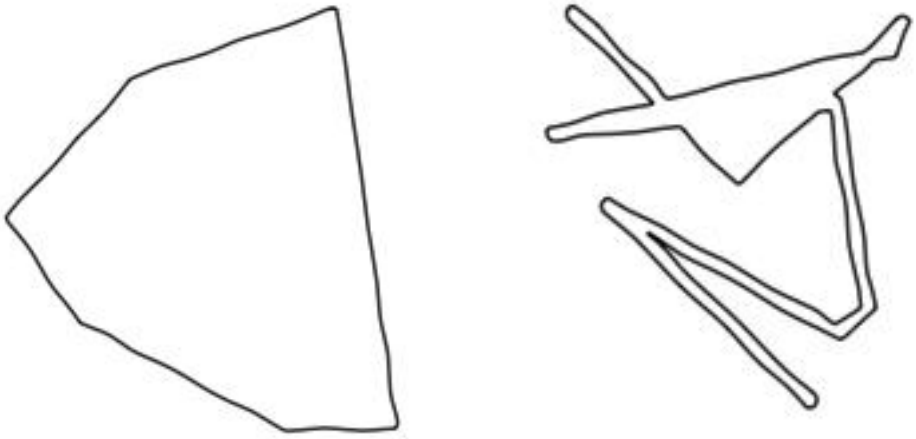
Accepting that my artistic processes could be modelled and executed in software, then finally seeing those processes run and create forms, no matter how simple, was something that came as a shock to me. I was surprised and pleased by what I saw, it was an inspiring and humbling moment.

Future Work

Out of curiosity I removed the part of the program that generated a convex hull around the random set of points, leaving a random set of lines. This less processed form resulted in far more complex shapes, and these shapes resembled my earlier pictographic work in some ways. I may pursue this by generating the skeletal forms using the kind of internalised shape grammars I use to generate my drawn forms.



Two development images by "draw-something" 2004



Two recent images by "draw-something" 2005

I am now working on adding colour to draw-something. The current system generates colour entirely randomly, and uses the PostScript fill operator to paint it. I plan to replace this non-system with a system to work conceptually with colour based on Douglas Hofstadter's "copycat" system (8), and a painting algorithm based on a stack flood fill. Flood fill is a simple and prosaic algorithm, but the stack-based version is remarkably similar to how I colour shapes by hand. My use of colour relies strongly on historical and cultural reference, as well as a strong sense of humour. I'm looking forward to trying to capture this in code.

An obvious question is whether draw-something's output succeeds in capturing artistic activity, even at the trivial level it is intended to. But as someone who failed the Turing test with my first encounter with a simple "bot" on an online text-based environment, I cannot claim that I am particularly well qualified to judge what is and isn't an acceptable substitute for human activity. In many ways I am more interested in what draw-something says about the moral and social meaning of my own drawing, which is after all only the same algorithm rendered by hand.

References

1 Almost all of my image-based work is now available under a Creative Commons License - http://www.robmyers.org/art
2 "War In the Age of Intelligent Machines", Manuel De Landa - ISBN 0942299752
3 The project "Surgical Strike" - http://www.robmyers.org/art/surgical_strike
4 "What Is An Image?", Harold Cohen -http://www.kurzweilcyberart.com/aaron/pdf/whatisanimage.pdf
5 "Turing's Man", J. David Bolter - ISBN 014015616
6 "How To Draw Three People In A Botanical Garden", Harold Cohen - http://www.kurzweilcyberart.com/aaron/pdf/how2draw3people.pdf
7 Available at SourceForge - http://rob-art.sourceforge.net/
8 Fluid Concepts And Creative Analogies", Douglas Hofstadter & FARG - ISBN 0465051545

Tony Longson

On 22 March 2005, the artist Tony Longson gave a talk to the Computer Arts Society.
CAS member Paul Brown introduced Tony, recalling that they first met in the mid-1970s at the Slade School of Art, when Tony was a visiting lecturer.

Tony's work explores the boundaries of visual space - chaos and order, structure and deconstruction. His presentation described the history of his early work and key influences.

His interest in spatial perception as a child was given form by study under Terry Pope at Reading University, where he joined Pope's newly formed Construction Studio. After a thorough grounding in English constructivism and input from artists of the Systems group encountered there, Tony's career has encompassed work done in Holland; at Newcastle, where he first used a computer in the early 1970s; on an Arts Council Fellowship at Hatfield; London and since the 1980s, the United States.

He cited the false perspectives seen in the Baroque architecture of Borromini as an early influence. Another inspiration was the work of American photographer Arthur Mole, who choreographed thousands of soldiers into formations. One of Mole's largest productions, the *Human United States Shield*, photographed at Camp Custer, Michigan in 1918, comprised 30,000 men. Tony is fascinated by Mole's pictorial device of using lots of separate elements (people) to make up the whole picture, which was distorted to create perspective.

Another influence were the images produced by the Jet Propulsion Laboratories in Pasadena, CA from the Mars probe. Using a flying spot scanner, the probe sent back panoramas of landscapes littered with boulders. Tony was impressed by the fact that the rocks in the background (being farther away) were nearly indistinguishable from the pixels that created their image. Later, in 1978, Tony become the second artist in residence at JPL, working alongside Bob Holtzman, Jim Blin, Eric Levy and others, who were producing computer simulated images based on data sent back from the probes.

Tony has always felt it important to use the characteristics or unique qualities of the tools or equipment available. At Hatfield Polytechnic he was able to use a computer controlled milling machine with built in symmetry switches, so he could design one quadrant of an image, and set the switches to mirror the pattern to the three other quadrants to complete the design.

Tony appeared in Ruth Leavitt's book *Artist and Computer* (1976) at this time and shortly after in *Idea, Experiment, Result*, (1981) an IBM commissioned film with Herbert Franke, Manfred Mohr and others. Meeting John Lansdown who visited Hatfield, Tony persuaded Lansdown to change the name of his Computer Bulletin column from 'Not Quite Computing - Almost Art' to 'Not Only Computing - Also Art' - demonstrating their belief, emphatically, that this activity was art.

At the Slade, Tony recalled using the flatbed plotter with rapidograph pens – notorious for blotting or drying up! These plotted drawings were screenprinted onto sheets of Plexiglas. He experimented with rotational symmetry. The marks (+ or x shapes) on each sheet are identical but rotated ninety degrees, the next one a hundred and eighty and so on, through the layers, making up a complete image. His work explores the interplay between 2-D and 3-D visual space (physiologically we are well equipped to see three dimensions, yet we are trained to interpret grid patterns as 2-D surfaces) and exploits our desire to make order out of chaos. Geometric marks form a flat grid pattern when viewed from straight on, and break apart into a cloud from any other viewpoint. Although it is difficult to appreciate this in photographic reproductions as first hand experience of the work is vital to the visual experience.

For Tony, programming is one of the ultimately satisfying things to do. To make art is the highest endeavour of mankind - not only trying to solve a problem you also need to invent the problem in the first place and to that extent art transcends any other kind of activity. Programming is a very close analogy to that way of working – conceiving of the problem in the first place and then figuring out a means of solving it.

Tony Longson is currently Professor of Art at CalState, Los Angeles.

Catherine Mason

•

Metzger in Vienna

11 May to 28 August 2005

Generali Foundation Wiedner Hauptstrasse 15
Vienna

GUSTAV METZGER
History History

"The broadly conceived retrospective offers a detailed overview of Gustav Metzger's oeuvre within its historical context. Numerous original works and documentary materials showcase Metzger's significance from the 1960s until today. Accompanying the exhibition is a comprehensive monograph with contributions from Justin Hoffmann, Kristine Stiles, and Andrew Wilson, and also an illustrated chronology."

Curator: Sabine Breitwieser

http://www.gfound.or.at/

The show will be reviewed in PAGE 61

Artist Placement Group

Art and Social Intervention: The Incidental Person

The archive of the Artist Placement Group (APG) has been acquired by theTate Archive Collection. APG was founded by artists Barbara Latham and John Latham in the late 60s. It placed artists into situations within industry and government organisations in Britain. This happened mostly due to Barbara Steveni's energy and commitment in negotiating placements with, amongst others, British Steel, British Rail, British Airways, Esso Petroleum, ICI Fibres Ltd, Ocean Fleets, National Bus Company, National Coal Board, Department of Health and Social Security, the Scottish Office, Peterlee Development Corporation and Milton Keynes Development Corporation. APG was not aiming to seek employment for artists, but was "run in the belief that society is starved of an important ingredient when creative people are kept outside the working parts of government, organisations and institutions." (1) There were setbacks; for example, in 1972 the Arts Council of Great Britain discontinued funding on the basis that the 'APG is more concerned with Social Engineering than with pure art'.

A day event at Tate Britain on 23 March 2005 to mark the acquisition started with the opportunity to view some of the material, sadly only on show for the day. Nicholas Tresilian, art historian, gave a useful overview of APG's practice. He explained that we might think that twice as many people and organisations are involved. In fact, Barbara Steveni and Barbara Latham are the same person, and APG and O+I are basically the same organisation. In 1989 APG regrouped and took the name O+I, Organisation and Imagination, in order to distinguish itself from art administration's placement schemes. I wonder if it was also an attempt to distance itself from the weight of John Latham's Time-base Theory. There was a filmed statement by John Latham, his voice frail but determined and oracular as ever. O+I continue to make new associations between artists and organisations.

Tessa Jowell MP, Secretary of State for Culture, Media and Sport, gave a typical politician's speech. We watched a short film of Tony Benn talking with Barbara Steveni. He was an advocate of APG when he was Minister for Technology during the 70s. He introduced their concept to other government departments, most notably the Department of Health.

A discussion panel was made up of artists who had taken part in the early placements and also a few representatives from the private and public sector organisations. It was difficult to tell the artists apart from the industrialists. I was reminded of the very end of Orwell's Animal Farm, when the animals look through the window and cannot tell the difference between Farmer Giles and the pigs. Anyway, I dislike and am uncomfortable with the unspoken notion that artists have a monopoly on creativity.

There was a call from the floor for a more critical assessment of APG's work, and Stuart Brisley questioned APG's insistance of the 'open brief', one of their key tenets. From what I understand, the 'open brief' was an insistence that, at the start, the artist must not be limited in scope. However, it seems to me that at some stage there has to be an agreement on what the artist is going to do and going to need. A second discussion panel made up of younger artists whose work relates to APG today, seemed more radically activist in their practice. The debate investigated the role of the artist in social, political and economic fields but was disappointing because it lacked direction.

In 1971 APG's exhibition inn$_{7}$o (Art and Economics) took place at the Hayward gallery, London. It included documentation from placements and also documentation of John Latham's car crash. The APG office, sitting room and meeting place were reconstructed as a living sculpture and there was an installation of the Industrial Board Room. In one gallery, interviews were set up between industrialists and artists to question the new role of the artist in society. The Computer Arts Society was invited by APG to submit outlines for projects for inclusion in inn$_{7}$0, see PAGE 2, May 1969. Alan Sutcliffe published his letter to John Latham in PAGE 19, December 1971: "We... decided that a contribution from the CAS documenting its history would be best... Sadly, we could not find anyone with time to prepare such an exhibit. I think it would have fitted into inn$_{7}$o well. Like APG, the society has been concerned with establishing links between artists and organisations, fearing the further alienation of the creative forces from those that drive society".

The real question is not so much was there any art produced during the placements, but in what way, if any, did they change the organisations? Was APG just part of the growing trend towards community art, or did they fundamentally cause this movement to advance? Did they help to organise the rally, or did they just go on the march?

"APG's principles have appeared disturbing for the existing art frameworks both in the market and within colleges of art. However, from the point of view of the larger economic unit, human society as a whole, this move by artists towards the social context, was right by art and right by the interpretation of history. A move in effect, from expressionist art to an art of implementation."(1)

Nicola Sutcliffe

1 'Art as Social Strategy in Institutions and Organisations' by John Latham and Barbara Steveni, May 1980

www.tate.org.uk/learning/artistsinfocus/apg

The Patric Prince Collection at the Victoria & Albert Museum

The Patric Prince Collection of digital art is in the process of being acquired by the Victoria & Albert Museum through the American Friends of the V&A. The first 250 items, less than half of the whole collection, have now been received. Patric built the collection partly during her connection with SIGGRAPH over many years.

On 16 March 2005 Doug Dodds, head of Central Services at the V&A, spoke about the collection to CAS members, who were then able to see over thirty graphics from the collection, some familiar, some new.

Our thanks to Doug and his colleagues for a beautiful display, and to Patric for this marvellous donation.

CAS members with V&A staff viewing the collection in the V&A Prints and Drawings Study Room

From a photograph by Nick Lambert

CAS Meetings

6 – 9pm Thursday 19 May 2005

Members of the Computer Arts Society are invited to the opening of
INSPIRE
the annual Multimedia Technology degree show at the University of Greenwich

INSPIRE presents this year's crop of new media graduates from Greenwich: a chance to see the work of multimedia technology graduates as they come onto the job market

On show will be creative websites, edutainment, digital video, interactive television, 3D animation, and computer games

INSPIRE will be held in King William Court at the University's stunning Maritime Greenwich Campus, part of the Greenwich World Heritage Site

The show is open to the public 12 - 4pm Friday 20 and Saturday 21 May

Directions:
http://www.gre.ac.uk/about/campus/maritime.htm

•

May/June **2005**
Progress of the CACHe Project

Nick Lambert and Catherine Mason will provide an update on the progress of the CACHe project on the history of computer arts being carried out in the Art History Department at Birkbeck College

It is hoped to hold this meeting at Birkbeck but the time, date and location are to be confirmed
Please see the CAS website for details
www.computer-arts-society.org

•

7pm Tuesday 21 June 2005
Multimedia Technology at Greenwich - ten years on
Tony Mann

The University of Greenwich first offered a BSc (Hons) in Multimedia Technology in 1995

The degree was designed for students wishing to use computers for creative purposes in the arts and entertainment worlds as well as the traditional computing industry

This talk will discuss the issues involved in running such degree courses, and how they have developed in a fast-changing multimedia world, and will present work produced by students in the last ten years

The School of Computing
and Mathematical Sciences
King William Court
Maritime Greenwich Campus
University of Greenwich

Directions:
http://www.gre.ac.uk/about/campus/maritime.htm

On this visit it will also be possible to see the
Computer Museum at Greenwich
http://computermuseum.gre.ac.uk/

COMPUTER ARTS SOCIETY

British Computer Society Specialist Group

Bringing together artists and technologists
Exchanging techniques and ideas
Formulating needs for support
Helping to get works known
Exploring new forms

ABOUT THE COMPUTER ARTS SOCIETY

Aims
The Computer Arts Society (CAS) promotes the creative uses of computers in the arts and culture generally

It is a community of interest for all involved in doing, managing, interpreting and understanding information technology's cultural potential

Membership & fees
Membership is open to all who are interested in the aims and activities of the group

There is an optional annual contribution of £10 (€15 or $20 overseas) for which members receive a printed copy of each issue of PAGE

The British Computer Society (BCS)

The CAS is a Specialist Group (SG) of the BCS

The CAS receives funding from the BCS

Each CAS member who is not already a member of the BCS automatically becomes an SG Affiliate member of the BCS

Website
www.computer-arts-society.org

Publication
PAGE the Bulletin of the Computer Arts Society appears quarterly and can be downloaded from the CAS website

Archiving computer arts
The CAS was active from 1968 until the mid 1980s

There are significant archives of material from this era, mainly stored in homes and offices of people then active in the group

The CAS is working closely with CACHe, a project in the Art History Department of Birkbeck, University of London, which is documenting UK computer arts in the years to 1980

The collection, identification, collation and handing over of material to the CACHe team will continue in 2005 & beyond

This leads to a wider interest in the archiving, study and presentation of computer arts from earlier years

Present & future computer arts
With so many novel and exciting developments in the creative uses of computers in the arts the society will continue its original aims of bringing together those active in this area

Collaboration
The society plans to hold joint events with other BCS Specialist Groups and hopes that this might develop into wider collaboration

Education
The CAS plans to have an educational role in making students more aware of early work in computer arts and in helping artists to use computers creatively

CAS Committee

Chairman
Dr George Mallen
george@ssl.co.uk

Treasurer
Dr Alex Zivanovic
alex@zivanovic.co.uk

Membership Secretary
Christos Logothetis
christos@logothetis.co.uk

Webmaster
Paul Brown
paul@paul-brown.com

Minutes Secretary
Dr Nick Lambert
n.lambert@hist-art.bbk.ac.uk

Editor of PAGE
Alan Sutcliffe
4 Binfield Road
Wokingham RG40 1SL
alansut@ntlworld.com
0118 901 9044

Nam Loc
deep_frost@yahoo.com

Catherine Mason
cs.mason@hist-art.bbk.ac.uk

Tony Pritchett
tony@agmp.net