PAGE
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THE COMPUTER ARTS SOCIETY

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METASEMIOTICS

Approaches to a metasemiotics for visual phenomena

o LIMITING OF THE SUBJECT

Our starting-point is the ordinary-language term, *image*, but its meanings are limited only to a few of the most important ones:

- likeness/or copy/of the shape of somebody/or something/;
- close likeness;
- mental picture/or idea/;
- simile/metaphor/;
- reflection seen in a mirror/or through the lens of a camera/.

The meanings of the word, *picture* could have been still added to them, mainly in order that the negative character of our restrictions be clearer as -paraphrasing the title of an article by Ch. Metz, "Au-dela de l'analogie, l'image"/in *Communications* No. 15/ -we want to research not beyond but *on this side of the analogy.*

1 DISCIPLINARY WAYS OF THE APPROACHES

1.1 Art

This way is marked by eg Kandisky, Klee and Moholy Nagy, who each try to build a system of understanding of image methodically starting from the matter of artistic representation. In recent times there are some artistic trends as well as some artists that have an aspiration for creating a visual "metalanguage" cf for example concept-art as well as J. Kossuth.

1.2 Visual thinking/psychology/

One of the tasks of psychology is to explain visual perception in general, and the mechanism of the visual recognition of the "world". In the meantime, such processes and structures become clearer so for example the problems of interpretation and memory which have by the visuality a connection with the problem of image directly.

On the other hand and in an other sense art-psychology is dealing with the analysis of images, too.

We expect from this method that the understanding of these psychological mechanisms would help us to create a metasemiotic framework. One of its most important tasks would be to explain the continuous character of the visual phenomenon and the discontinuous character of its understanding/ that is the analogical-digital conversion/.

1.3 Models for image processing/by computer/

The purpose of image processing is to create mathematical models that are suitable for functional description of human visual abstraction.

In the field of image processing -or even more generally in the field of pattern recognition-progress leads up from the direct classifying/statistical/methods to the linguistic analytic/algebraic as well as logic/methods.

The basic problem of the linguistic methods is the definition of picture grammars/extending over problems like pictorial ambiguities, anomalies and paraphrases/.

Different applications could be yielded by this approach eg in data-processing, in memory-displaying, in computer graphics, and in computer-animated film.

In recent times the questions related to the pictorial metalanguage came into the lime-light, and those new researches are particularly remarkable which try to generate pictorial grammars in an inductive manner.

1.4 Semiotic approach

The traditional hypothesis about the *image* or in this framework about the *icon* essentially remarked a structural likeness in the relation between the icon and its object (cf C S Peirce). Change has come only by Umberto Eco's basic criticism and by the discussion in *Versus*. At the same time an idea is raised that the thinking about the icon is in another model than other semiotic phenomena. It is a question to be decided which model would be desirable, and which model can really explain icon.

On the other hand researches in the past years showed that some semantic strata can be discovered within icon. There is, however the problem, where the limits have to be sent from our point of view, which strata belong to this side and which ones do not.

2 SOME IMPORTANT AIMS

The disciplinary ways marked in the former point, though they were simplified, have set themself the same task - yet for the sake of different concrete purposes - to find out an explication of the problem: *what is icon.*

First of all we have to find such a starting-point for answering these questions in general with the hope that we are not only able to create a newer element of that paradigm which is formed by hypothesis trying to explain icon. Our purpose is a more immodest one.

Therefore we have to define those criteria that we expect of an image-theory, and particularly we have to examine into its possible epistemological states. It is clear that there are different consequences of it for we should do it differently if the example an *instrumental* hypothesis is only able to be built and differently if a *real* one is able to be - using the terms in K R Popper's sense - or in other words, for example whether the "language" of the image-theory can have natural/non-artificial/language base; how deep and what type of logic is desirable or what type of semiotics is needed.

These researches which are metatheoretical ones considering the image-theory would have another function as well, the explaining hypothesis mentioned in the former point might be associated with the aid of analysis.

3 REQUEST

According to our plan the results of our researches will be recapitulated in a book.

We would like to ask you to support our plan with propositions, matters or with whatsoever kind of contribution.

This request aims at creating communications: if you are interested in the above topics, please answer it.

Anna Vari

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TEXTILE DESIGNS

Computers are a means to expand human's ability.
When a textile designer's ability is expanded by
the use of computers, he can develop the new
possibilities of textile design.

Now many men research CATDS (Computer Aided Textile
Design Systems) to develop the new possibilities
of textile design. But CATDS need special hardware
and software. So they must spend great cost and
long time.

Five years ago, I wanted to design patterns by the
use of computers. Because almost consumers who
buy high fashioned textile goods want fresh patterns,
in the first step, I applied computer arts to design
fresh patterns. And I selected the ways as follows:

    I use ready-made computers
    I program by FORTRAN IV
    I compose handworks to finish works

I utilized many I/O units as shown figure 1, I
compose handworks from each output unit to finish
works. I will show you them in figure 2. Now
I am producing program package systems from my
program for textile design.

This method is so practical and flexible. Because
this method can use ready-made computers and has
various output formats. I have designed patterns
for neckties, kimono accessories, and golf costumes
by the use of computers as shown in figure 3. These
goods have a good sale in the Japanese market.

I get plenty of useful data to produce CATDS by
these experiences. In a future day, I aim at a
total CATDS. Now many automatic textile machines
that are controlled by computers have been developed
all over the world. New I/O units were developed,
too. I will utilized them. So I will expect to
solve the following three problems in the next steps.

    Converse with a designer and a computer
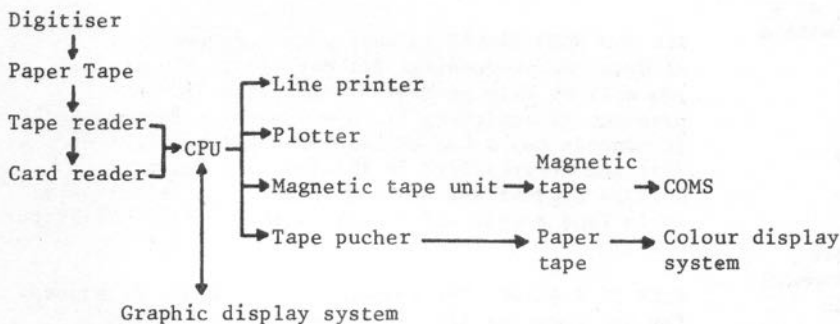   Computerize handwork process
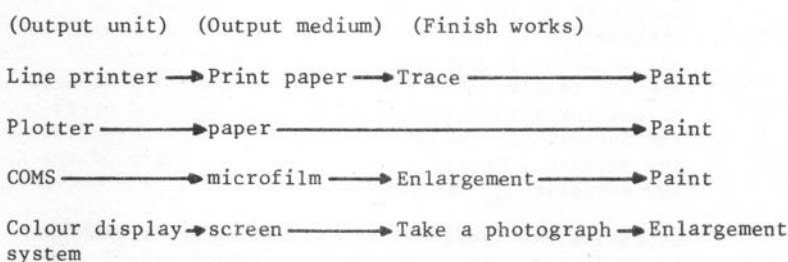   Combine with a manufacture process

Figure 1 Utilized computer system

Figure 2 Finish process

PROGRAMMING HELP WATNED

I need a Programmer: firstly, to program some
readily available graphic symbols demonstrating
the various aspects of light on the physical
environment. Secondly, to program an assumed
distance from symbol to symbol: the distance
must be assumed as it will be my choice of
connecting the intensity of light - on a tree,
on a flower and on the hair of the person. The
assumed distances will be organised either to be
superimposed or to have a formal distance from
each other. Thirdly, to program certain behav-
ioural aspects of both light (sunlight) and the
person, taking into consideration the movement
of the earth.

On the practical side, when we arrive at the
actual programming and the use of the graph
plotter, we will of course simplify to adjust
to their symbols and activities, but that will
give me enough information to prepare a proper
structure of different programs later on.

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NECKTIES PRODUCED BY ASAKURA SHOJI CO LIMITED

Published	Motif	Product	Pattern
July 1971	Maple	Jacquard	12
March 1972	Dot	Jacquard	13
July 1972	Paisley	Jacquard	10
Sept 1972	Arabesque	Jacquard	6
		Print	13
March 1973	Check	Jacquard	10
July 1973	Symphony	Jacquard	10
March 1974	Line	Jacquard	10
July 1974	Metamorphose	Jacquard	10

KIMONO ACCESSORIES PRODUCED BY TAKESHITA SHOTEN

Published	Motif	Product	Pattern
1972	Chrysanthemum	Jacquard	5

GOLF COSTUME PRODUCED BY TYS

Published	Motif	Product	Pattern
Oct 1973	Karakusa	Print	2
May 1974	Stripe	Print	2
Oct 1974	Geometric Pattern	Print	7

Figure 3 published textile goods

News & Views

DUTCH DANCING: For those of our readers who were in Holland at the end of November, there was another chance to see Another Dance Group performing John Lansdown's latest work in the field of Computer Dance and Music.

YEAR OF THE SNAKE: If you would like to purchase a striking new multi-coloured Computer Graphic closely resembling a serpent by Colin Emmett and Alan Kitching you should get in touch with them at Grove Park Studios, London SE1. You get a calendar with it too.

SWEDISH ACTION: During the CAS workshop at the Stockholm Electronic Music Studio in August some other sights were seen too.

New range of Electronic Music modules from Dataton AB Ekhagsvagen 7, 10405 Stockholm. Including an impressive Program Sequencer, which stores up to 1000 events. Times, actions and device numbers are entered through a numeric keyboard. Costs about £400. Has been used to control a Carousel projector as well as other Dataton modules: noise and frequency generators, amplifiers, filter, envelope shaper, ring modulator, reverberatior unit, mixers.

OVE III Speech Synthesiser developed in the Technical University and available from AB Fonema, Box 1010, S-64025 Julita. A string of symbols denoting phonems is typed in and out comes the speech. Its English has a charming Swedish accent, since Swedish phonemes are used. Very intelligible, and sounds like a real person with ad odd collection of minor impediments. Costs about £800 plus your own mini-computer.

The final round of the first world computer chess contest was an absorbing spectacle even for someone who plays chess like super-draughts. Six simultaneous games shown on large display boards with an informative commentary by David Levy. There were three methods of playing: over a voice line or a remote computer, at a terminal over a data line to a remote computer, with a mini-computer in the Hall.

The Russian program KAISSE won. The better programs played some good moves, but all played some bad ones. Play lacked strategy, and games were always slow.

RECENT ARTICLES IN LEONARDO: Intelligent Computers and Visual Artists - Michael Thompson - Vol 7 (Summer). On the simulation of an art work by Markhov Chain with the Aid of a Digital Computer - Yves Kpdratoof Vol 6.

A Program on Art and Science at the Bezalel Academy of Arts and Design, Jerusalem, Isreal - Vladimir Bonacic - Vol 7 (Winter).

Experiments in making drawings by computer and by hand - Colette and Charles Bangert - Vol 7 (Autumn).

On producing graded black and white or colour computer graphics in combination with a photographic technique - Herbert Franke - Vol 7 (Autumn).

MONEY AND LIFE

Since Gustav Metzger gave up the editorship of PAGE we have not been able to keep up regular publication. We are sorry for that.

Correspondingly, we have not collected subscriptions during 1974, since for most members Page is what they get for their money, we are going to try to bring out 8 issues during 1975.
We also need your news, articles and material of all sorts for the forthcoming ossies: send your contributions to Alan Sutcliffe.

LASER DISPLAY

Artists with £40,000 or so to spare will find a great boon in the new HRD-1 laser display/plotter produced by Laser-Scan Limited of Cambridge, England. The display has a 100 cm x 70 cm (39 in x 27 in) screen and can draw over 5000 x 3500 resolvable lines. Practically continuous intensity variation means that it can draw shaded pictures as well as line drawings. The speed of drawing is such that a map defined by 350K bytes of data has been drawn in under two minutes.

The drawing to be displayed is written by a computer-controlled laser beam onto an orange photochromic film. The image produced is continually projected at ten-fold magnification on the large translucent screen as black lines on an orange background.

The image is retained for 15 minutes or so after which it begins to fade at a rate which can be controlled. The device is interactive and has a tracker ball, typewriter keyboard and set of function buttons to allow input of data and images. Hard copy is obtained by changing the polychromic to diazo film which produces an image on fiche size (148 mm x 105 mm) in negative.

This is clearly another device which in the next few years will influence the direction of computer graphics and we await with interest news of the first creative uses.

ALL YOU NEED IS £30 to have your very own copy of Eurocomp proceedings for May 1974. Then you will be able to read "An appraisal of some problems of achieving fluid man/machine interaction" (E Edmonds and J Lee of Leicester Polytechnic) or "Art and Cybernetics" (E Ihnatowicz - University College London) and other goodies. The alternative is to find a well-off library with a friendly librarian.

SLIP US A SLIDE: The response to the call for slides for the Computer Art bit of the Science Museum's New Computer Gallery has been very good. However, keep sending them to John Lansdown. Latest date for the Opening is sometime in 1975.

AIMS AND MEMBERSHIP
The Society aims to encourage the creative use of computers in the arts and allow the exchange of information in this area. Membership is open to all at £2 or $6 per year, students half price. Members receive PAGE eight times a year, and reduced prices for the Society's public meetings and events. The Society has the status of a specialist group of the British Computer Society, but membership of the two societies is independent.

Libraries and institutions can subscribe to PAGE for £2 or $6 per year. No other membership rights are conferred and there is no form of membership for organisation or groups. Membership and subscriptions run from January to December. On these matters and for other information write to Alan Sutcliffe.