BECK & JUNG
COMPUTER GRAPHICS

1984

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We are living in an age when the leading principles for global information are simultaneousness, frequency, and mobility. It is the co-ordination of all these structures of experience that has made us inhabitants of the global village which is forming our image of the world. As a matter of course, this has also influenced the way that artists work. Beck & Jung (behind these pseudonyms are hidden Holger Bäckström, Beck, and Bo Ljungberg, Jung) form an artist constellation which has adopted itself to the new demands on artistic ability. The co-operation of the two has its origin in their realization that an individual artist with the means at his disposal is not alone able to meet the quickly changing demands on his awareness of all that is happening in our age of information technology. In order to reduce their individual language in favour of a picture principle they sought a module system for the building up of pictures that may be compared to the alphabet or the numerical system. This system, that they had developed by 1966, has consequently been called the picture alphabet and it has made Beck & Jung a recognized name on the artistic world map.

The eleven modules of the picture alphabet consist of six figures based on the geometrical basic forms, i.e. the circle, the ellipse, the rhomb, and the square. By turning, combining, and interchanging the modules of the picture alphabet in various sizes the two artists get a nearly infinite variation of patterns and configurations. The many different figures of the picture alphabet might be compared to game pieces with which Beck & Jung, each with his own artistic personality (one an engineer with an interest in form, the

other an artist with an interest in the technical side of picture creation), exchange thoughts and ideas in a playful way. Most artists would consider this kind of co-operation quite impossible but to Beck & Jung nothing can seem more natural. They have likened it to playing a duet on the piano. This sense of playing well together has during the years developed into a working solidarity that is filled with humour and witty brainwaves. Their co-operation is one of the longest and most successful within the domain art.

If painting, which is intimately connected with the role of the individual artist, is characterized by the durability of the work of art in the form of the exquisiteness of the material and the mastership of the artist's hand, then the use of the picture alphabet means a radical change in artistic activity. The great problem of how to make the most of the unlimited possibilites that the picture alphabet affords caused Beck &Jung to turn to the computer for help. The computer gave them variations and configurations with an enormous speed, a variety out of which the artists chose the starting-points for the creation of their pictures. In this process the experimentation with different materials has played an important role. The durability of the picture is no longer as important as the ability to amplify and recreate. The unique work of art was put aside in favour of diversity and mass communication.

A further and important step in their inventive collaboration was made possible by the Color Ink Jet Plotter. This automatic colour plotter was developed at the University of Lund, Sweden. With the computer plotter
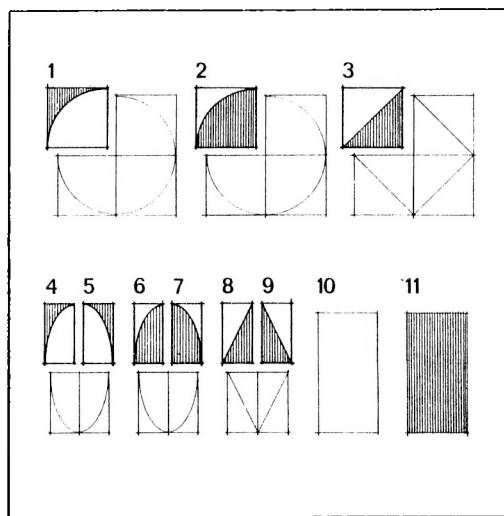

Bildalfabetet, 1966. The Picture Alphabet, 1966.

they have created a sequence of pictures which they call Chromocube. Together with the programmer Bob Wissler the artists transform their picture ideas into computer language. In the Chromocube the distribution of colour in a cube is investigated.

As the computer plotter works with three colours only (red, blue, yellow), one corner of the cube was made entirely red, one entirely blue and one entirely yellow. One corner of the cube remained uncoloured (white) and one corner got all the three colours on top of each other (black). With the computer's help these colours have been divided and blended in three dimensions in the cube (the colour body). The Chromocube has been built up from 17x17x17 smaller cubes, i.e. no less than 4913 building stones each with its own nuance. By intervening and reducing the cube according to the intentions of the artists, new visual configurations are constantly being created from the original cube. One form passes into another, a manifestation of the constant dialectic play going on between the artists and the computer. The variations seem to be infinite.

In their new images Beck & Jung continue the analytical research of the perceptual structures that they begun with the Chromocube. In the series Dragon and Dendra the object of the investigation is the relation between two and three dimensional structures, or if you want, between appearance and illusion.

The series Dragon is based on a two dimensional construction. But with the help of the computer Beck & Jung makes it possible for us to experience the three dimensionality of
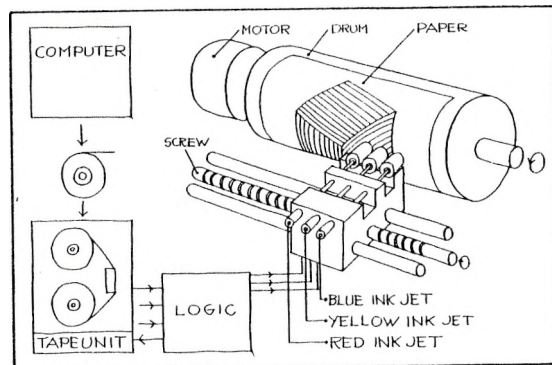

The Color-Jet Plotter.

the image by showing it from different view-points. It is a purely visual illusion that almost has the character of a spatial enigma.

In the Dendra series Beck & Jung avoids the illusion in order to concentrate on the appearance. The two dimensional structure is built by two hectagons cut through by thin black lines. In the upper hectagon the multicoloured stripes have been weaved together in a congenial mixture of chance and order by the computer. If one studies these colours intensively the simultane contrast increases and the fatigue of the eye creates afterimages. It is then natural to project these into the lower, white hectagon. A never ending movement between the two structures is started by the computer and continues by the viewer.

Making technology do service in the creation of pictures is fully in line with the view that Beck & Jung have of their task in today's society. Art has to reflect its own age and to take an interest in new scientific achievements in order to enrich the artistic possibilities. Beck & Jung's use of The Color Ink Jet Plotter is founded on a wish to present not only the completed works of art but also the working process where each picture is an information section of a bigger sequel structure. The artists have been enthralled by the enormous possibilities in size and vision offered by the technical opportunities. Not only is Beck & Jung's new sequence of pictures revolutionizing as regards visual thinking and the use of computer technique for the purpose of creating pictures, but the pictures themselves are exceptional on account of their great beauty.

Bo Nilsson.
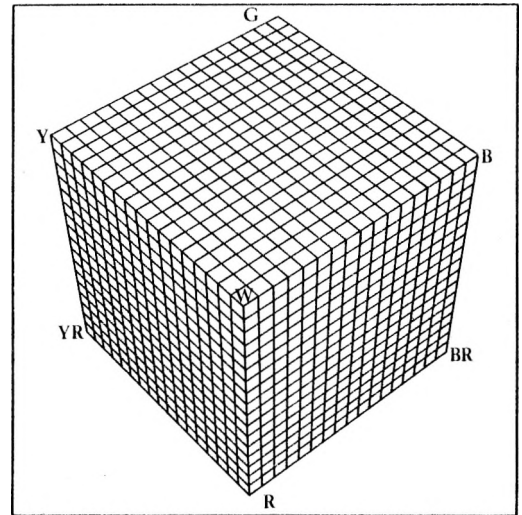
*Chromo Cube, 1980*

Separatutställningar/One man shows

1967 Lunds Konsthall (with P A Gette), Sweden
1968 Felix Konstklubb, Eslöv, Sweden
1969 Galleri AE, Göteborg, Sweden
     Galerie Leger, Malmö, Sweden
1970 Galleri Engelbrekt, Örebro, Sweden
     Galerie Alliance, Copenhagen, Denmark
     Galleri Prisma II, Stockholm, Sweden
     Trelleborgs Museum, Sweden
     Galleri Kråkeslätt, Bromölla, Sweden
1971 Galleri Larsson, Gävle, Sweden
     New Art Gallery, Odense, Denmark
1972 Galerie Bleue, Stockholm, Sweden
     IBM, Copenhagen, Denmark
     Felix Konstklubb, Eslöv, Sweden
     Galerie Palletti, Zürich, Switzerland
1973 Galleri AE, Göteborg, Sweden
     Arkivmuseet, Lund, Sweden
     Galleri Anna, Göteborg, Sweden
     New Art Gallery, Odense, Denmark
1974 Galleriet, Lund, Sweden
     Galleri Kråkeslätt, Bromölla, Sweden
     Galerie Leger, Båstad, Sweden
     Gallerie AE, Göteborg, Sweden
     Galleri Futura, Falsterbo, Sweden
     Galerie du Parc, Fribourg, Switzerland
1975 Galleri Ahlner, Stockholm, Sweden
     Galleri Arbetet, Malmö, Sweden
     Galleri Alba, Ronneby, Sweden
     Karlskrona Konstförening, Sweden
     Galleri Anna, Göteborg, Sweden
1976 Galleriet, Lund, Sweden
     Galleri AE, Göteborg, Sweden
     Galleri Futura, Falsterbo, Sweden
     Galleri Gallera, Jönköping, Sweden
     Grafikhuset Futura, Stockholm, Sweden
     Galerie Mebius, Göteborg, Sweden
1977 Galerie Nordenhake, Malmö, Sweden
     Lomma Konstförening, Lomma, Sweden
     Galerie Leger, Båstad, Sweden
     Art 8'77 Basel, Switzerland
     Gallery 410, New York, N.Y., USA
     Grafikhuset Futura, Stockholm, Sweden
1978 Östersunds Stadsmuseum, Östersund, Sweden
     Eslövs Stadsbibliotek, Eslöv, Sweden
     Lilla Galleriet, Eslöv, Sweden
     Galerie Actu Art, Helsingör, Denmark
     Galleri Änglamark, Simrishamn, Sweden
     Lomma Konstförening, Bjärred, Sweden
     Galleri AE, Göteborg, Sweden
1979 Galerie Leger, Malmö, Sweden
     Lilian Heidenberg Gallery, New York, N.Y. USA
     Eva Cohen Gallery, Chicago, Illinois, USA
1980 Grafikhuset Futura, Stockholm, Sweden
     Karl Bornstein Gallery, Los Angeles, Calif., USA

Wissler, 1980.
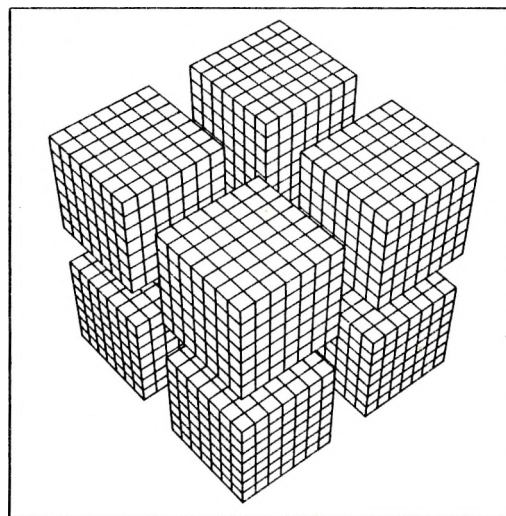
1981   Eva Cohen Gallery, Chicago, Illinois, USA
Pratt Institute, New York, N.Y., USA
Arkivmuseet, Lund, Sweden
Galerie Leger, Båstad, Sweden
Galerie Berglöf, Gävle, Sweden
Galleri Anna, Göteborg, Sweden
Eskilstuna Konstförening, Sweden
Grafikhuset Futura, Stockholm, Sweden
1982   Burlöfs Konstförening, Arlöv, Sweden
Lilla Galleriet, Eslöv, Sweden
Art 13'82 Basel, Switzerland
Galerie Altes Rathaus, Inzlingen, West Germany
Museet i Varberg, Sweden
Lunds Universitet, Sweden
1983   Landskrona Museum, Sweden
IBM, Copenhagen, Denmark
Galerie Sten Eriksson, Norrköping, Sweden
Galleri Lilla Nyborg, Borgholm, Sweden
Malmö Museum, Sweden
Universität, Karlsruhe, W-Germany
1984   Norrbottens Museum, Luleå, Sweden
University of Technology, Luleå, Sweden

Övrigt/Complementary notes

1967   Participated in Neue Städtische Wohnformen in Vienna,
Austria and Zürich, Switzerland
Swedish TV-film by Christian Romare
Awarded grant by the Cultural Comitee of Stockholm,
Sweden.
"Revolving wall", film by Ola Billgren-Urban Lasson
1968   Awarded the Ellen Trotzig Scholarship
1969   Participated in the Interzum Messe, Cologne, W-Germany
1970   Awarded scholarship by Skåne's Art Society
"Visual Techniques", Folke Edwards Paletten no. 2
"Konst med dator", TV-film by Ragnar Odlander
1971   "Westinghouse Wall", TV-film by NBC, USA
1972   Recieved the Swedish Grand Working Scholarship.
"Mönster", TV-film by Sören Engelbrektson
Participated in 11 Museum Shows in England, France
and USA about the installation of "Hello patient" at
Huddinge Hospital, Stockholm, Sweden
Awarded scholarship by the town of Lund, Sweden
Front Cover for Matematik Gy, Almqvist & Wiksell,
ISBN 91-20-05054-2
1973   Participated in the "Biennale de la Jeunesse", Paris,
France
Art 4'73, Basel, Switzerland
Recieved the Swedish Grand Working Scholarship
"Moderna svenska konstnärer", Eugen Wretholm
II, ISBN 91 37 05249 7
1974   "Konst i Skåne 1954-1974", Viola Robertsson-Torsten
Weimark
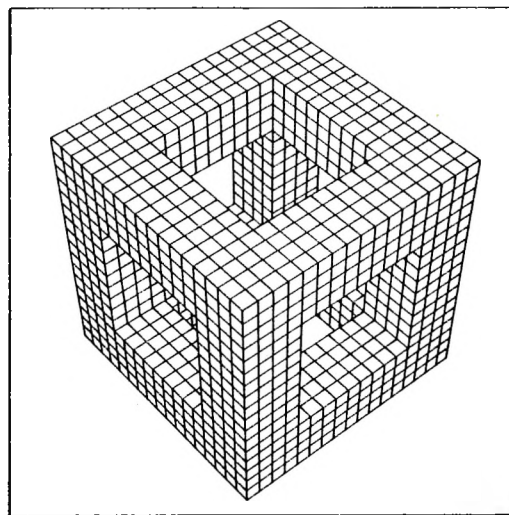
Hole in one, 1981.

1976 Participated in Art 7'76, Basel, Switzerland
1977 Washart 77, Washington, D.C. USA
1978 Washart 78, Washington, D.C. USA
     "Plexi Cubes", Edition Meissner, Hamburg, W-Germany
     International group show at Galerie Tameaga, Tokyo, Japan
     Art 9'78, Basel, Switzerland
     Art et Informatique, Unesco, Paris, France
1979 "Art info", Domberger Verlag, Filderstadt, W-Germany
     Participated at the International Artexpo, New York, N.Y., USA
     Rubicon Gallery, Los Altos, USA
     Majorie Kaufman Gallery, Houston, Texas, USA
     Centre Culturel Suedois, Paris, France
1980 Participated in L'artiste et L'ordinateur at Norrköping Museum, Jönköpings Museum, Sweden and Seclin, France
1981 "Ett hus för konstens skull", Ulla Delborn, Sköna hem no. 4
     Participated in "Musée des esquisses d'art public", Centre Culturel Suedios, Paris, France
     Majorie Kaufman Gallery, Houston, Texas, USA
     International Art Expo, New York, N.Y., USA
     "Beck&Jung", Bo Nilsson, OPUS International, May, 1981, Paris, France
     L'art public, Marianne-U. Ström Bordas, Paris, France ISBN 2 04 011014 3,
     "Wege der Computerkunst", Universitätsbibliothek, Kiel,W-Germany
     Participated in Art Expo West, San Francisco, Calif., USA
     "Computer Graphics", Tekniska Museet, Malmö, Sweden
1982 "Computer Graphics IKAROS", Kulturhuset, Stockholm, Sweden
     "Beck&Jung", Bo Nilsson, Lin/SAS Art collection 1982.
     "Computer art", Wolfgang Huebner, Leonardo XV-2, Pergamon Press, Oxford, U.K.
     "Chromo Cube", Francois Molnar, Leif Eriksson, Wolfgang Huebner, Bob Wissler, Wedgepress & Cheese, Sweden ISBN 91 85752 30 4
     "L'art et L'ordinateur", CISI, Paris, France
     "Konstnärer i Skåne-Blekinge", Pedagogförlaget AB, ISBN 91-85768-24-3
     "Konstverkens liv i offentlig miljö", Sv.allm.konstför. Sven Sandström, Mailis Stensman, Beate Sydhoff, 1983
1983 Front cover for "Datalära", Lundaredaktionen, Sweden
     Ars + Machina II, Rennes, France
     Participated in the 3rd Biennial of European Graphic Art, Baden-Baden, W-Germany
     IFIP 83, Centre Georges Pompidou, Paris, France
     "ELECTRA", Musée d'Art Moderne de la Ville de Paris, France
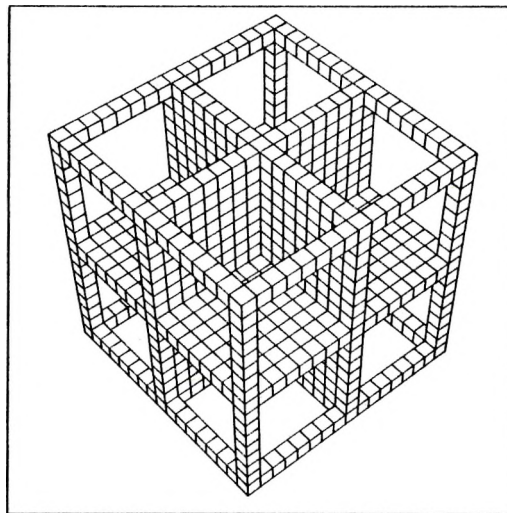
Grip Duke, 1982.

Offentliga monumentalutsmyckningar
Permanent installations

1968 Astra, Södertälje, Sweden
1969 Skytteskolan, Göteborg, Sweden
      Anglo Nordic Bank, Zürich, Switzerland
1970 Örebro Tekniska Verk, Sweden
      Malmö Kommunala Bostads AB, Sweden
      Prästelundskolan, Brande, Denmark
      Dahlgaardskolan, Brande, Denmark
      PLM, Malmö, Sweden
      Grantofte Kollektivhus, Copenhagen, Denmark
1971 Westinghouse, Pittsburgh, Penna, USA
      Länsarbetsnämnden, Malmö, Sweden
      Helsingborgs Lasarett, Sweden
      M/S Scarlett, Sweden
      Jönköpings Lasarett, Sweden
1972 Malmö Allmänna Sjukhus, Sweden
      Televerket, Malmö, Sweden
      Huddinge Sjukhus, Sweden
      Mosleskolan, Värnamo, Sweden
      Öresundshuset, Malmö, Sweden
      Linero, Lund, Sweden
      Sweden Center, Tokyo, Japan
      Bergsjöskolan, Göteborg, Sweden
1973 M/S Gustav Wasa, Poland
      M/S Aurella, Sweden
      M/S Svealand, Sweden
      Caroli City, Malmö, Sweden
      Engelbrektsboden, Malmö, Sweden
      Felix, Eslöv, Sweden
      PLM, Malmö, Sweden
1974 Provinsbanken, Hundie, Copenhagen, Denmark
      Linero, Lund, Sweden
      Marabou, Stockholm, Sweden
      Galanite, Arlöv, Sweden
      Provinsbanken, Lyngby, Copenhagen, Denmark
      Beijer Invest, Stockholm, Sweden
      Östergötlands Sparbank, Norrköping, Sweden
      Sturup flygledarskola, Sweden
1975 M/S Nils Dacke, Sweden
      Lomma Kommun, Sweden
1976 SE-Banken, Lysekil, Sweden
      Tanktekniktjänst, Boxholm, Sweden
      Chalmers, Göteborg, Sweden
      Tidningen Arbetet, Malmö, Sweden
      Hotel Lundia, Lund, Sweden
1977 Televerket, Malmö, Sweden
      Savoy Hotel, Malmö, Sweden
      Provinsbanken, Glostrup, Copenhagen, Denmark
      Humlebæck Bank, Denmark
1978 Provinsbanken, headoffice, Copenhagen, Denmark
      Provinsbanken, Stenlöse, Denmark
1979 Leo, Helsingborg, Sweden
1981 PK-Banken, Malmö, Sweden
      Provinsbanken, Hørsholm, Denmark
      Alfa-Laval, Lund, Sweden
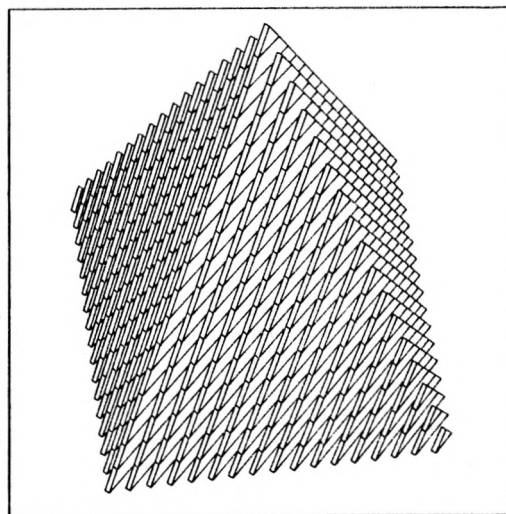   Lawyer's ass., Chicago, Illinois, USA
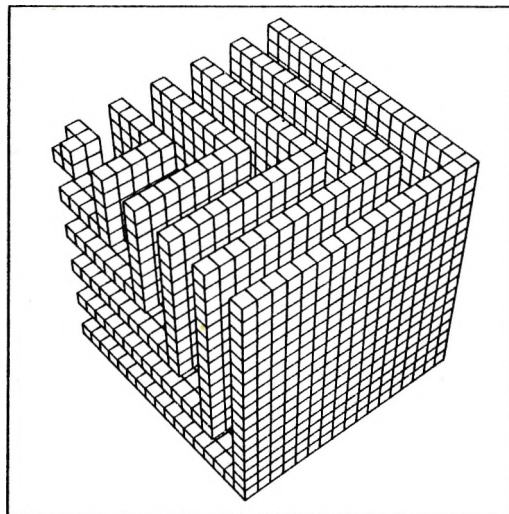
Kite corner, 1982.

IDA, Malmö, Sweden
Karlskrona Lasarett, Sweden
1982 SAS, Stockholm, Sweden
Televerket, Malmö, Sweden
1983 Sydkraft, Malmö, Sweden
PLM, Malmö, Sweden
Apple European Head Center, London, U.K.
Kema Nobel, Stockholm, Sweden
Citibank, Hong Kong
PLM, Dongen, Holland
Swedish Trade Office, Houston, Texas, USA
1984 Högstadieskolan, Veberöd, Sweden
Båstad Hospital, Sweden

Representerade på/Museum collections

Arkivmuseet, Lund, Sweden
Bibliothèque Nationale, Paris, France
Cooper-Hewitt Museum, New York, N.Y., USA
Eskilstuna Konstmuseum, Sweden
Franklin Furnace, New York, USA
Gentofte Konstbibliotek, Denmark
Gruenenbaum, UCLA, Los Angeles, Calif. USA
Gävle Museum, Sweden
Göteborgs Konstmuseum, Sweden
Halmstads Museum, Sweden
Kalmar Museum, Sweden
Kunsthalle, Kiel, W. Germany
Kunsthalle, Rostock, DDR
Landskrona Museum, Sweden
Linköpings Konstmuseum, Sweden
Malmö Museum, Sweden
Massachusetts Institute of Technology, Mass. USA
Milwaukee Art Museum, Wi, USA
Moderna Museum, Stockholm, Sweden
Museum of Modern Art, Budapest, Hungary
Museum of Modern Art, San Fransisco, Calif. USA
Museum Ludwig, Cologne, W-Germany
Nationalmuseum, Stockholm, Sweden
Norrköpings Museum, Sweden
Röhrsska Museet, Göteborg, Sweden
Stadsmuseet, Östersund, Sweden
Tessininstitutet, Paris, France
The National Museum of Modern Art, Tokyo, Japan
University of Lund collection, Sweden
University of Linköping, IDA, Sweden
Varbergs Museum, Sweden
Värmlands Museum, Sweden

Tebtunis, 1982