MICHELE EMMER Editor

## Mathematics and Culture II

(Z) **Mathematics and Culture II** Visual Perfection: Mathematics Springer

Berlin 2005

EMMER (Ed.)

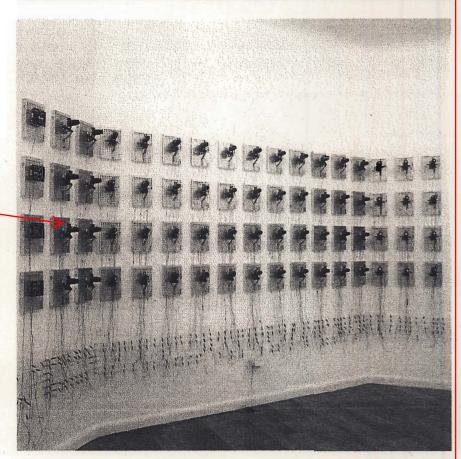


Fig. 12. Ciervo

Costantino Ciervo is an Italian artist whose works were shown in the year 2001 for the first time in the USA (New York). He shows us that in his opinion there are lots of possibilities for the "truth": March 2000 during the annual meeting of the German Society of Didactics of Mathematics he installed a twelve meter long piece on a wall of the Altes Rathaus Potsdam. Sixty-four boxes were connected each of them by six wires to a symbolic truth-giving machine. Each wire could bear electricity or not – therefore  $2(\exp. 6) = 64$  different "truths" were possible. But in addition to these 64 possibilities which were realised by combination of the different inputs he introduced a very special effect: Directed by photo-cells each box could change its worth of "truth" or not in the moment when a spectator passed. By this the artist demonstrated that in his opinion there does never exist only one objective "truth". Truth is always an individual coloured one. Reflecting the number of living individuals on earth we come to a very big but again not infinite number of "truths", too.

## **Summarisation**

With only a few of examples we demonstrated how useful mathematics and arts are cooperating today. But links do not only exist between arts and mathematics. We find them between mathematics and music, mathematics and poetry and others, too. To study and use these links may give us tools to understand future connections between our science and the culture of tomorrow.

## Literature

Max Bill, Max Bill - Endless Ribbon 1935–1995 and the single-sided surfaces (with texts from Max Bill, Jakob Bill, Dietmar Guderian and Michael Hilti, Benteli Verlag, Wabern-Bern, 2000.

Costantino Ciervo, catalogue, Kunstverein Hürth, 1999.

Costantino Ciervo, catalogue, Janus Gat Gallery, N.Y. in cooperation with Galerie Ralf Vostell, Berlin, 2000.

Waltraut Cooper, Eine Werkübersicht, Galerie im Stifterhaus, Landesgalerie Oberösterreich, Verlag der Apfel, 1998.

- T. Dreyfus, Th. Eisenberg, Symmetry in Mathematics Learning, Zentralblatt für Didaktik der Mathematik (1990) vol. 2, p. 53.
- S. Fehlemann, V. Flusser, K. Gerstner, Karl Gerstner, catalogue, Museum für Gegenwartskunst Basel, 1992.
- K. Gerstner, Ideenskizzen und Bilder Color Fractals, Edition Cantz, Ostfildern, 1992.
- D. Guderian, Über die Mathematik im Werk von Rune Mields, Staatsgalerie Baden-Baden und Kunstverein Bonn, 1988.
- D. Guderian, Logik und Strenge in Anton Stankowskis Werk, Johann-Karl Schmidt (ed.): Anton Stankowski: Gemälde 1927–1991, Galerie der Stadt Stuttgart, 1991.
- D. Guderian, Mathematik in der Kunst der letzten dreißig Jahre, edition und galerie lahumière, Paris und Bannstein-Verlag, 79285 Ebringen i. Br. (English translation: Mathematics in the Arts of the recent thirty Years, see under www.ph-freiburg.de/mathe/guderian).
- D. Guderian, Mit System zu Wohlgefallen Beziehungsgeflechte, Herbert W. Kapitzki and Fritz Seitz (ed.): Anton Stankowski, Freunde erinnern sich, avedition Ludwigsburg, 1999
- D. Guderian, Endlich Unendlich (catalogue), University Potsdam, Bannstein Verlag, 79285 Ebringen i. Br., 2000.
- D. Guderian, *Der Erforscher Gerard Caris*, Gerard Caris (cat., ed. Peter Volkwein), Museum für Konkrete Kunst Ingolstadt, 2000.
- F. James Rutherford (dir.), Benchmarks for Science Literacy, Oxford University Press, New York, Oxford, 1993.
- B. Sandfort, catalogue, Städt. Kunsthalle Mannheim, 1987