

TERRAIN 01

ULRIKE GABRIEL



AN OTHERSPACE PROJECT

A supposedly trivial view continues to crystalize to form the central idea behind our scientific and philosophical search for a consistent world picture:

We are a part of this world.

The destruction of our exceptional external standpoint as regards the cosmos commenced at the beginning of the century with the theory of relativity which revealed that the absolute space and the absolute time of Newtonian physics was a superfluous ideal basis for classical mechanics.

The formulation of quantum mechanics in the 20's and 30's brought the second blow. There are no external observer positions in the scope of quantum mechanics. The state of quantum-mechanical objects is observer-dependent. Physical findings from the micro-cosmos established the idea of a holistic world picture.

The theory of chaos as the tentatively last scientific revolution formulated the complete interlinking of all dynamic systems with the "sensitive dependency on the initial conditions". Even the smallest of causes may bring about effects which dominate systems under non-linear dynamics. In the extreme, every form of externality is rendered impossible with this.

SYNTHETIC WORLDS

The very latest findings in brain research appear to confirm that our understanding of the world is determined by the way we interpret our own image of the environment evolving in space and time. The new idea of endophysics attempts a standardization between biological and physical interpretations by postulating a physics dependent on the brain of the observer. However, with this, every form of understanding of a fundamental dilemma seems to fail. We are completely unable to consider the whole thing as we are a part of the whole thing. In order to sound out the possibilities of understanding our world we must create "artificial" worlds to which we have both an internal as well as an external stance. TERRAIN creates virtual "synthetic worlds". TERRAIN materializes "virtual realities" from light energy, environmental platforms and simple living beings.

TERRAIN 01

TERRAIN 01 is an interactive "artificial life" installation, a non-autonomous one, because it is a world of autonomous cybernetic vehicles dependent on external light energy. The plane, round TERRAIN 01 characterizes its cosmos and, at the same time, limits its horizon. The inner unconscious state of an external observer, his brain wave pattern, controls the global state of a robot colony, synonymous for the indissoluble crosslinking of the world of thoughts with the world of matter.

BOTTOM-UP DESIGN

TERRAIN 01 characterizes the functional minimal form. The ideal oval vehicles are solar-driven and consequently energetically autonomous. Their world is a plane circular disc irradiated from the outside with light. Light was chosen deliberately as the most natural source for a local, autonomous energy supply. Robots possess the very simplest of sensor "sensory organs" with the aid of which they perceive each other and can move around without coming into contact, within TERRAIN 01. In addition to the robots' basic equipment which allows them to move freely within the colony, there is also a second sensorial system to detect and process global light intensity changes. These are the only external parameters in TERRAIN 01. The global light distribution changes depending on the sensorially detected brain activity of an external observer. External and internal worlds are simple, coupled reciprocally: the more chaotic the state of the observer, the quieter the robot colony.

TOP-DOWN OBSERVATION

In TERRAIN 01 a colony of autonomous beings moves within a circular world. On account of system-immanent non-linear interactions, a complex structural formation develops with the continuous adaptation process of the individuals to the external environmental influences. The "living" movement pattern of the permanently active living beings lures the observer away to fantastic psychological interpretations of their behaviour. The order states of the dynamic system, with periodic and chaotic dynamics between the extremes of rest and a completely random movement, characterizes the paradigm of complexity.

The whole is more than the sum of all parts.

Michael Klein

Generator: Jens Heise

Sensorics: Bob O'Kane

Trichanics: Siegfried Albrecht

produced at Städelschule, Institut für Neue Medien, Frankfurt/Main