Deep Blue
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A project in co-operation with the Offenes Kulturhaus, Linz.

The room is dark, sometimes with faint blue light near the floor. There is sound in the room. The sound and the blue light change and fluctuate in accordance with the movement and behaviour of the visitors. A background rhythm is provided by the sound of the trams crossing the Niebellungen Bridge, picked up by sensors located near the Ars Electronica Center.

New technologies are not created in a flash of inventive genius nor are they the result of goal-oriented long-term planning. As Thomas Kuhn pointed out 30 years ago in his *Structure of Scientific Revolutions*, changes in scientific paradigms occur as the result of a prolonged metamorphosis. The same can be said of revolutions in technology or human society. Nor do scientific, technological or social/cultural revolutions occur in isolation. The sudden explosion of new ideas in science, breakthroughs in technology, political and social revolution and the sudden emergence of new forms of art, music and literature are invariably locked in a gradual process of cultural change for which there is no identifiable common cause.

Kuhn's thesis concerns the sudden shift, amounting to a revolution, which takes place at the point when the old theories finally collapse and are replaced by the new with the result that all definitions and traditions must be adjusted to the new situation. Kuhn called this a shift of paradigm, but it is not unlike the notions concerning the phenomenon of sudden change contained in the chaos, catastrophe or bifurcation theories. These theories are concerned with the way that things, molecules, ecosystems, cultures, oscillate between periods of stability and instability — between chaos and order, coherence and confusion.

In cultures, the moment of change, although abrupt in relation to the gradual building up of tensions preceeding it, is a fairly long process which can take place over several generations. That is, there is a long period following a fundamental change in a culture or civilisation in which the society adjusts — assimilating new elements into daily life until there is very little left of the old culture except nostalgic recollections. The new thinking and working methods must be assimilated at every level of society — new metaphors created, new textbooks published, new social structures organised, ideologies tried and discarded. Looking backward from the end of the 20th century we can now see that the last 100 years or more has been such a period. We are living in a new era, and the world of our grandparents is as remote and distant for us as the Middle Ages.

For artists, the loss of the classical traditions has been particularly disturbing. Any artist who has attempted to merge an art practice based on 19th century art traditions with the art practice demanded by the new electronic media, especially the networked media, will have encountered the problem of incommensurabilty — trying to combine two things which are mutually exclusive. Thinking in terms of objects, products and "craftsmanship" while working with technologies which are fugitive, transient and immaterial is a symptom of living on the cusp of cultural change — straddling the paradigms, so to speak. As the new traditions begin to form around technologies like digital sound [sampling], interactive systems, and virtual reality, the familiar traditions of the real — of products and things — begin to lose definition and fade into memory.

Working in these new media is very different than in the traditional media. For one thing it is almost always collective and collaborative. This means that not only is art changing and being

redefined by the new electronic communications media, but the artist is also changing and undergoing redefinition. When working in a team an artist soon discovers that the old hierarchies no longer prevail. The artist, even when he/she is initiator of the project, is simply an equal partner and co-author in a collective work, not least because so much of an artwork in the electronic media is invisible — as programming, hardware adaptation etc. The artist's name on the work — and on the grant application — is merely the element defining it as an artwork.

Artworks in these media are never finished. There is no final work just as there is no original — merely an infinite series of variations. The work exists as a program, generating images, sounds or events in accordance with the hardware/software configuration — and the mood of the receiver. That is, each recipient of the material participates in the creation of his or her own version of the work. Which means of course that the traditional "audience" is being redefined as "participant" in the same way that the artist is being redefined as "collaborator". This applies as much to the lonely Web-Surfer hunched in front of his/her monitor as to the temporary inhabitant of a VR environment. We are talking here a of a process of re-integration — of the merging of producer and consumer.