Introduction

Moving Out

In general the second half of the sixties can be characterized as an ex-
plosion of creativity, in which artists explored new means of expres-
sion, new materials, new forms. The key word at the time was that
artists wanted to "break the boundaries," or "cross the boundaries" of
the well-defined art object. One strategy to do so was to bring cheap,
non-precious daily-life and junk objects, natural materials like dirt or
plants, and temporary materials subject to decay into the exhibition
space. Names like Fluxus, Arte Povera, Process Art were introduced to
name these experiments. The next step was to go outdoors, into nature
or the city environment. Among the first artists to leave the studio were
the so called "earth artists." Michael Heizer went into the desert. So did
Walter De Maria. Robert Smithson had a preference for deserted indus-
trial wastelands. In the beginning the Earth Art movement was ge-
nerally perceived as an anti-art establishment statement, whereby ar-
tists were now using the land as their canvas or as sculptural material.
Heizer has voiced his opinion about its origins: "One of the implica-
tions of earth art might be to remove completely the commodity status
of a work of art and allow a return to the idea of art as more of a reli-
gion."[1] So, in addition artists objected to the conventional triangular
artist-gallery-museum system, because it had become too commercial
and corrupt in the eyes of many artists. The elevated tone of Smithson's
voice against the art system leaves no room for misunderstanding:
"Visiting a museum is a matter of going from void to void. Hallways
lead the viewer to the things once called 'pictures' and 'statutes.' Ana-
chronisms hang and protrude from every angle. Themes without mea-
ning press on the eye. Multifarious nothings permute into false win-
dows (frames) that open up onto a veracity of blanks," he wrote in his
article "Some Void Thoughts on Museums."[2]

Yet the initial negative attitude turned positive with Robert
Smithson's site/non-site dialectic which became the theoretical
foundation for a series of environmental works, relating internal and

external aspects of the chosen site, such as the geology and human history (as exemplified by human destruction, for example), which eventually led to his thoughts on land reclamation as a future possible function of art. This quotation already shows that the flight outdoors did not just remain an attack on the art system. The curator of the first *Earth Art* exhibition (1967) at the Andrew Dickson White Gallery, Cornell University, Ithaca NY, may have recognized this early on, when he wrote about art's being eventually reintegrated into the social system rather than remaining something distinct and remote from other activities. Once the transition to a socially integrated art is complete, we may see the full implementation of an art impulse in an advanced technological society. Earth artists just may fulfill an ideal stated earlier by John Cage to "set forth a view of the arts which does not separate them from the rest of life, but rather confuses the difference between Art and Life, just as it diminishes the distinctions between space and time."[3]

Into Technology

The wave of new technologies that swept the sixties could not but affect the visual arts. It was the time that the electronic media and the computer gradually became available to the public. Among the new materials explored by artists initially were video, laser, holography, the computer. As it happens, these media are characterized by immateriality, temporalness, and non-objectiveness, and although expensive production modes, they are in essence non-precious. In fact, one of the major technical qualities of video or computer works is their reproducibility. The field of presentation of these media - being by nature information and communication media - was initially often seen to lie outside the museum and gallery walls: on television, festivals, or in the context of plain community services and education.

Thus, around 1965/1966 there was a situation in which a group of New York artists expressed a growing interest in technology, looking for access and knowledge. When re-reading the writings in publications, newspapers, magazines one notices an incredibly optimistic belief in this technological progress. During the twentieth century there had already been a number of art movements that were characterized by the attention that was paid to the artistic possibilities of the latest techni-

ques, following current scientific discoveries (Bauhaus, Constructivism). In the latter half of the sixties there was yet another peak, which happened to be congruent with the introduction of the technologies that have now permeated our daily existence. The heyday of this Art and Technology Movement lasted only four years (c.1968 until 1972). The relationship between art and technology and art and science was a much debated topic, but was mostly discussed in terms of similarities (creativity) and differences (methods and objectives). In 1966, writer John Gruen wrote enthusiastically of "artists and engineers deliberately joining forces. ... Their aim is to start a revolution. To overthrow old concepts, to reach into the unknown and produce art works that will combine the most advanced technological discoveries with the most daring, the most outrageous creative ideas an artist may be capable of dreaming up."[4] Two years later, artist/writer Douglas Davis began an article euphorically with: "Living as they do, in a super technological society, American artists have quite naturally turned to the products, processes and imagery of science and industry. Some approach technology with traditional attitudes, others are using it to alter the very definition of art, but all who succumb to its fascination have responded with a new sense of exhilaration and discovery."[5] It could have been just another of those art and science/technology waves that rippled the arts in the twentieth century, but even at the time the Art and Technology Movement was already perceived as being different from the previous ones.

In Search of Another Context

Sometimes it seems that there have been as many expressions in the visual arts as artists since the sixties. Yet the 'moving out' into nature or the environment and 'into technology' since the mid-sixties are the two movements which stand out. The first went into history as the Earth Art and Environmental Art movements, the second as the Art and Technology movement, of which video and computer art became the best known exponents.

The Earth Art and Environmental Art, and the Art and Technology movements are said to have started from the premise "to break the boundaries of art," to change the commercial art world structure. In review this is only partially true. Even if both 'movements' only existed

a few years, they have initiated new thoughts about the function of art and the role of the artist. The changes that took place in the work of a number of artists since the mid-sixties in the United States and elsewhere might be interpreted as a beginning of a re-orientation; as the germination of a search for another context, or function. The initial purpose to break the boundaries of art and the art system did not stop at enlarging the boundaries by including other territory. What happened was that the artists who went into the public environment sought contacts with and access to other disciplines to create a work of art that would be a part of the environment, so that the work might function through a relationship with or in context with 'the real world.' For the first time in a long time artists who ventured to investigate new media began to seek an equal collaboration with engineers and technicians, even if it was initially the only road which led to the knowledge and access of the new information and communication technologies, and born out of necessity. The positive aspect in the exploration of new structures was directed to ideally include art and artist in a new social system. This ideal in fact connected the new artistic ventures with the utopian and often rather vague notions of social and political change envisioned in the 1960s.

Indeed, the most important characteristic of the technologically oriented artists was a new type of interdisciplinary collaboration between artists, scientists and technicians. Later on inter- and cross-disciplinary collaborations also became normal in the production of public environmental sculpture. This implied that the artist entered into a new relationship with the environment, space, public arena, onto the terrain of other sciences. The important thing is that the art work became a part of a larger context, that this contextualization of the art work became the starting point for a number of artists to create a work that was no longer an object, but one that consisted of elements that were related to one another as in a system.

Although there is no specific correlation between the developments in the visual arts and the sciences, it is noteworthy that the shifting interests in the arts also revolved around concepts of time and space as a time-bound reality (Albert Einstein), events and processes, used with implied randomness and a probability factor (Werner Heisenberg). At that time the ideas of a systems approach and cybernetics spread rapidly and found application in numerous disciplines, both in the natural and social sciences. A central element in both theories was the deve-

lopment of a (mathematical) language which would facilitate an understanding between different scientific disciplines, and interdisciplinarity. The descriptive language used here found its way into the brochures describing the features of new technologies like video and the computer (feedback, closed-circuit, random access memory, etc.). In addition, "seeing things in relations" - a concept borrowed from systems analysis - became an important phrase. I think it is important to recall that the new technologies were basically technical applications of a number of preceding scientific discoveries with such penetrating consequences as to force scientists to completely rethink the mechanical world model on which their research was hitherto based.

At any rate, the discoveries of two sciences were central in this constellation: general system theory and cybernetics. Through the writings of Norbert Wiener, Herbert Marshall McLuhan and R. Buckminster Fuller they also infiltrated into the art world. In particular those artists informed themselves who showed an inclination and curiosity in new technologies, like video, or computer graphics. Marshall McLuhan's *Understanding Media* was widely read, and his "the medium is the message" became an adage, even if it was not always precisely understood.

Although it might seem at first sight that there is no continuity between the Environmental Art and the Art and Technology movements of the late sixties and the nineties' developments in Art in Public Places and the Media Arts, which now include the new Virtual Reality and Cyber Arts, both have their roots in this period, for it is the search for a new context which connects the two periods. And although at first sight oppositional movements which might even work against each other, it is this search for a new *context* in which the arts could function differently and which would in turn involve a changing role of the artist, which constitutes a rarely discussed but central element in the development in both directions. How artists ventured onto new terrains and what this meant in terms of changing the conditions for the production, presentation and reception of the art works will be the central theme of this book. Further I will discuss the far-reaching consequences this had for the traditional analysis of the art work, which was predominantly based on style and form.