

**Experience in interactive art
– homo experimentator in an
ontological laboratory**

Thinking of modern art, especially of its multimedia or *hypermedia*¹ trend, we inevitably come across the problem of interactivity, which brings us to questions connected with the dynamic development of new computer technologies. As Martin Rieser and Andrea Zapp emphasise, it gives us the conviction, not necessarily correct, that we can understand the evolution of contemporary language of art through following the progress of elaboration and modification of the interface². On the one hand, this notion is shared by many interactive art critics, but on the other hand, it is not certain whether it is the main reason why interactivity has appeared in art and whether today's technology is the factor which has determined its shape³. It is therefore worthwhile to analyse the career of interactivity before it came to be used in art and its links with the development of technology⁴.

It is an obvious fact that the notion of **interactivity** has become a key one for numerous representatives of social sciences, humanities, and cognitive science. The wide distribution of computer technologies is particularly significant in this context.

¹ The term used by, among others, Ryszard Kluszczyński in order to distinguish the special character of artistic activity using non-linear media – hypermedia. See R. W. Kluszczyński, *Spółczesność Informacyjna. Cyberkultura. Sztuka Multimediów*, Kraków 2001.

² *New Screen Media/Cinema/Art/Narrative*, ed. M. Rieser and A. Zapp, London 2002.

³ The opinion of Woody Vasulka and David Dunn is relevant here. They both stress the significance of interactivity arising from the research on computer technologies, control systems and artificial intelligence. Their own projects remain within this trend. See www.artscilab.org/pages/brotherhood.html (21 January 2005).

⁴ We omit the problem of interactive works prior to the era of using machines in art. The question of interactivity origins in art, relating to activity in the space of sacrum, is a complex one and cannot be adequately presented in this paper. We are aware that this comment is a part of a wide context, which can be considered in wider terms.

It is easy to notice that for a long time the study of understanding, cognition and mind⁵. Computer, a world of machines and universal minds – Pascal's "thinking reeds", has become an inspiring source of metaphors and an instrument in studying mind, memory, emotion, and motivation⁶. A partner in research and a subject of research at the same time. Within this trend, classic models of human memory, stressing its dynamic, reconstructive – constructive character, were created⁷. Architecture of mind is seen as a tangle of less or more ordered links, which may explain the intricate and dynamic system of constructing works of interactive art. Granting a share in the process of creation not only to the recipient but also to universal minds – machines – a reference to studies of AI⁸ – may explain the similarity between the way a work is created and the course of active and intentional reconstruction determined by actuality. Ascribing authorship or co-authorship to machines is a radical stance in art. Woody Vasulka working on iconic memory admitted that a dialogue with the machine is the essence of creation. The dialogue resulting from interaction presupposes the existence of interpersonal relation, the existence of equal subjects in interaction⁹.

The evolution of this point of view, beginning from the fascination with "the active and economic mind creating optimally

⁵ D. E. Rumelhart, P. H. Lindsay, and D. A. Norman, *A process model for long-term memory*, [in:] E. Tulving and W. Donaldson (eds.), *Organization of memory*, New York 1972.

⁶ Z. Chlewiński, *Umysł. Dynamiczna organizacja pojęć*, Warszawa 1999.

⁷ J. R. Anderson, *Cognitive Psychology and its Implications*, New York 1980. This publication belongs to the canon of cognitive science works.

⁸ The discussion about the problem of artificial intelligence and questions relating to reality representation is presented in various conventions. For a comprehensive review of attitudes, see D. R. Hofstadter and D. C. Dennett, *The Mind's I: Fantasies and Reflections on Self and Soul*, New York 1981.

⁹ *Art of Memory* by W. Vasulka presents a machine equipped with a prophetic image memory, which becomes a co-author of a film object. See www.vasulkas.org (19 September 2004) and R. W. Kluszczyński, *Spółczesność Informacyjna...*

inclusive and distinctive models of reality¹⁰ goes in the direction of forgotten ideas of subjective Self and the mind emerging from the tissue of social and actual interactions¹¹. The universe of internal senses is more and more often considered to be an idiosyncratic but equally valid representation of reality. Analysts of mind describe cognitive maps of human activity space, amazed by the subjectivity of the image of something so objective and unquestionable as physical reality and external environment¹². The world appears then as less and less logical and ordered. A pioneer of cognitive science, Edward C. Tolman, describes the world and the realm of human or machine mind as a "great God-given maze"¹³, which is formed by intentional actions of the subject, whoever or whatever it is. The significance of human cognition structure determining the course of perception, reasoning and experience is often emphasised. This structure – an astonishing network of associations and regulating rules, frequently finds a reflection in gestures, signs, graphic maps – notations of human cognitive strategies¹⁴.

The paradox of negotiating the truth about the world and the vision of one's own past can also be found in interactive works of modern art. The recipient is invited to encounter amazing properties of space, which are often merely reflections of his/her own mind¹⁵.

¹⁰ M. Materska, *Wstęp do psychologii z elementami historii psychologii*, Warszawa 2001, p. 71.

¹¹ H. Blumer, op.cit.

¹² "We believe that in the course of learning something like a field map of the environment gets established in the rat's brain. We agree with the other school that the rat in running a maze is exposed to stimuli and is finally led as a result of these stimuli to the responses which actually occur. We feel, however, that the intervening brain processes are more complicated, more patterned and often, pragmatically speaking, more autonomous than do the stimulus-response psychologists". E. C. Tolman, *Cognitive maps in rats and men*, *The Psychological Review* 1948, No. 4, pp. 189–208.

¹³ Recent research shows that human mind in a situation of ambiguity tries to simplify the task using maps. Graphic analysis of World Wide Web browsing strategies demonstrates how we travel in the space of meanings which we cannot wholly represent and how we search for sense in an apparent chaos. Similar strategies are used in examining physical space. The classic idea and assumptions of cognitive behaviourism are presented in E. C. Tolman's article from 1948. It should be remembered that contemporary research is conducted in the paradigm of ecological psychology.

¹⁴ J. R. Anderson, *Cognitive Psychology and Its Implications*, New York 1980.

¹⁵ It would be interesting to analyse graphic notations of potential interactions in interactive works. Graphic notations based on the principles of cartography are found already before the rise of hypermedia. It would be important to concentrate on how the earliest interactive works are connected to the problem of ritual, which would revive the stagnant matrix of notation thanks to the perspective of interaction. It seems that in the realm of art, and earlier in the wider area of sacrum, "licentious ornaments" may serve as examples of such notations. This term makes it possible to distinguish between those "licentious ornaments" and symbolic representations; see Wiesław Juszcak, *Występny ornament, czyli o napięciach między sztuką a kulturą*, [in:] *Fragmety. Szkice z teorii i filozofii sztuki*, Warszawa 1995. It se-

Man here is a knowing SUBJECT thanks to interacting with the world of symbols, both the ones already inscribed in the work and the ones generated during the interaction. This subject is not determined, although his/her choices are limited by roles s/he plays in a given context¹⁶. In the space of interactive art works this rule is one of the main ones, meaning free choice for the viewer and a possibility of co-creation but, at the same time, restricting this share in the process of creation to limited areas programmed by the artist.

First interactive works, e.g. Jeffrey Shaw's *Points of View* (1983/84) or Lynn Hershman's *Lorna* (1984) allowed viewers to independently operate and take active part in narration¹⁷. Interactivity offers the viewer a chance to establish relations with a work of art, which does not have the final form – it is the open work, open to constant interference from its recipients – interactors. The recipient of the interactive work, unlike the viewer of traditional art, is at the same time a source of action and reaction. As Piotr Sitarski writes about hypertext works, only when s/he goes down a "hypertextual route", "the final form of a text is recorded, and this recording is an outcome of the user's navigation, leaving a permanent trace"¹⁸.

As we see, acting in the context of interaction is **construction**. According to George H. Mead, human behaviour is not a simple reaction – a man modifies it as s/he perceives and interprets his/her situation¹⁹. If we realise the significance of this assumption of indeterminism and the constructive character of experience in interaction, we should accentuate the great role of **meanings** and their origins.

Creation of meanings and reaction to them in the interactive work may have various forms, from the simplest ones, like the possibility to choose the way situation develops, to unconscious co-creation of virtual space, which becomes a context for new gestures.

Christopher Hales's film *Twelve Loveliest Things I Know* (1996) can serve as an example here²⁰. The artist tells a com-

ems that these notations are to be found in the form of representations in temples, drawings, mosaics making an essential part of rites, and today as musical graphics or "scenarios" of interactive activities. We merely mention this problem here, for any deeper analysis could not be contained in this paper.

¹⁶ G. H. Mead, *Mind, Self, and Society*, Chicago 1934.

¹⁷ The following are mentioned as the beginnings of interactive art: Avant-garde, happening, closed-circuit installations, projects realised in TV studios and the first works made with the use of computers. See S. Dinkla, *Pioniers Interactive Kunst*. Karlsruhe: ZKM/Zentrum für Kunst und Medien-technologie, 1997, p. 25.

¹⁸ P. Sitarski, *Rozmowa z cyfrowym cieniem. Model komunikacyjny w rzeczywistości wirtualnej*, Kraków 2002, p. 103.

¹⁹ G. H. Mead, *Mind, Self and Society*, Chicago 1934.

²⁰ C. Hales, *Interactive Film and New Narrative Interfaces*, [in:] *New Screen Media/Cinema/Art/Narrative...*, p. 105.

plex story using interactive images and leads us through a world of a child's mind. There we find the protagonist – a boy loving the colour blue, possibly Hales himself – after many adventures with non-linearity, meanders of Proust's "seeking sense between objects and experience"²¹, and dialogues with characters we do not understand. The world of naive narration becomes in this story the key to decode our experience and self-knowledge. Childhood is the basis for identity enclosed in questions about twelve most beautiful things and the world lost.

The recipient goes through child's tales and sequences pasted onto landscapes, which make a guide to someone's story, guesses, and makes mistakes playing Gadamer's game²² – a game of interactive meanings. It depends on us what we find out and what will fascinate us, who we will see in the characters and, through them, in ourselves.

In the case of productions more technologically and conceptually advanced, we come across ontological experiments. This effect is visible in realisations using virtual space as a context for artistic activity. In the work by the Japanese artist Seiko Mikami *Molecular Informatics: morphogenic substance via eye tracking* (1996), the viewer-user is enclosed in a space which s/he co-creates, going through a labyrinth generated by his/her eye movements²³. At first s/he does not realise that s/he is travelling inside her/himself, getting to know his/her internal space. His/her unawareness is the work's driving force.

The viewer's behaviour – reaction is not determined, but it would be difficult to assume his/her full indeterminism as well. Ryszard Kluszczyński, in his attempt to systematise the chaos of notions in the critique of interactive art, writes that the artist's objective (in interactive art) is to create a "context, in which the recipient constructs the object of his/her experience and its meaning"²⁴. The artist formulates "a kind of metanarration" – creates a space of possible potential interactions. Thus, interaction, as we know from Mead's assumptions, cannot be entirely predicted on the basis of its initial conditions – also in a work of art²⁵. This theory often motivates interactive experiment critics to announce the "death of the author". However, contemporary commentaries are far from such radical conclusions.

An interactive work of art makes us realise to what extent the recipient-interactor's indeterminism is limited by the world of meanings s/he generates.

It can be said that the unpredictability of actual interaction is limited to some area of meanings, where interpretation and decision about one's own behaviour take place. Karl Popper's opinion seems suitable here – commenting the openness of human choices, he stresses their larger or lesser probability depending on what precedes them, on the initial state²⁶. Mead's followers maintain that the factor restricting indeterminism is roles adopted by people. These roles, in Mead mostly in a social context, limit the freedom of interpretation and influence decisions concerning future reactions²⁷. These theses can be related to the situation of the recipient-interactor in interactive art, with its openness, and dialogical and interpersonal character²⁸.

In a work of art, interaction occurs in time. In its course, there occur gestures – fragments of actions determining their further course. It can be words, sounds, movements, or dress. Such gestures realise their meaning in fragments of actions – behaviours, which follow them. Gestures, which have a clear meaning – always predetermine the same behaviours – become meaningful symbols for those who perform them and those who observe. Meaningful symbols are at the basis of interaction organisation²⁹.

And so virtual protagonists of interactive works seem to make their own decisions about gestures and signs, thanks to which the viewer goes through subsequent levels of initiation. In Luc Courchesne's *Salon des ombres* (1996) or Jill Scott's *Frontiers of Utopia* (1995) and *Beyond Hierarchy?* (2000) virtual characters of various epochs can meet each other thanks to the structure of the works and a viewer's active participation. They meet outside time and space, ask questions addressed to the viewer or interact with other characters. Sequence, conversation topic and subsequent stories happen thanks to the interactor's imagination. S/he decides whether "Mary" from 1900 will speak to "Marie" who fought for freedom and peace in the world in the 1970s (*Frontiers of Utopia*) or "Piotr", a Polish miner from the 1940s will exchange opinions with "Sabine", employed in an electronic company in the end of last century. Narration, like in the prose by Proust or Joyce, is not linear – there are no chains of events and their results, but it is constructed in layers, which can be interconnected at will.

Nearly all interactive works, in which the computer, or precisely the interface, mediates between what is remembered and direct actions performed in real time by the viewer-user,

²¹ M. Proust, *Pamięć i styl*, Kraków 2004.

²² H. G. Gadamer, *Prawda i metoda*, Warszawa 2004.

²³ See www.idd.tamabi.ac.jp/artworks/Molecular_Informatics/Index.htm (25 September 2004).

²⁴ R. W. Kluszczyński, op. cit.

²⁵ G. H. Mead, op. cit.

²⁶ K. R. Popper, *Wszechświat otwarty. Argument na rzecz indeterminizmu*, Kraków 1996. See also K. R. Popper, *Świat skłonności*, Kraków 1996.

²⁷ G. H. Mead, op. cit.

²⁸ R. W. Kluszczyński, op. cit.

²⁹ S. Cubitt, *Spreadsheets, sitemaps, and search engines*, [In:] *New Screen Media/Cinema/Art/Narrative...*, p. 3.

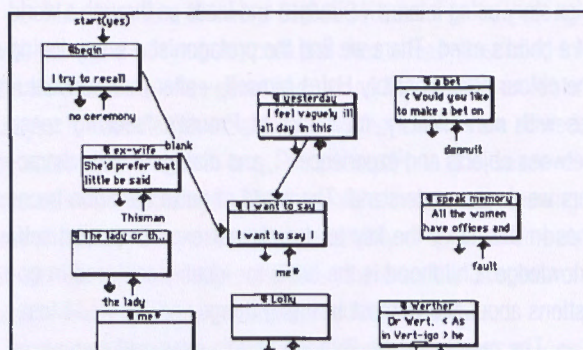
are examples of such realisations. Works by such artists as Luc Courchesne, Jill Scott, Ken Feingold, or Christopher Hales were designed as active and open spaces, in which narration is subjected to continuous changes and thus to continuous deconstruction. It is subordinated to the recipient's choices and interaction. Structure of the interactive work narration becomes similar to hypertext literary forms, one of the first realisations of which was *Afternoon* by Michael Joyce (1987). It was a kind of interactive text, composed by the author in its basic version, while the order of its story lines and episodes was created by the readers³⁰. In time, subsequent versions of the hypertext collages acquired more and more complex structures reminding the "rhizome" – a tangle of active points, links, layers and areas of constant creation and destruction.

Man in the interactive work is a knowing subject, not a pure self of classic epistemology. A subject who experiments, equipped with "a body which is an instrument of his/her actions"³¹, and uses experiment to interfere in the world around him/her – in this context, in the world of interaction. This behaviour does not necessarily lead to a better understanding and explanation of the reality generated in a work of art, but rather serves to change it and create new events. We obtain a paradoxical picture: a puppet of the unknown, endowed with a creative power – homo experimentator with the awareness of a child's mind. In interactive works of art we are puppets of our own choices.

In interactive art, interaction is possible, as we wrote earlier, due to the existence of a sphere of meaning – a context given in its potential version by the artist in the form of "space rhizome". Interactive art is a spatial phenomenon, although the structure of this spatiality is hidden and secret. As one passes subsequent spots and checks out all possibilities of the work, it is difficult to determine its outline and reconstruct its operating system. The form, or what we see on the screen, is only a small part of the usually intricate structure of the work. In the light of interactive art studies propositions and the temporal and spatial characteristics of interactive works, this space is a space of meanings generated during an encounter with the work.

Structure as experience in the interactive work of art

This complex machine of active links and criss-crossing points, with each of them having further connections, can be



1. Michael Joyce, *Afternoon* (1987)

likened to the form of today's culture described frequently as culture of fluidity.

Michel Foucault writes that the twentieth century was primarily an epoch of space. He calls it simultaneous, meaning that we place many things beside each other. He also refers to it as an epoch of the near and far, of the side-by-side, and of the dispersed³². Foucault described this space as "external space", which functions connecting and opposing real places and illusions that fill them³³. Hypertext has a similar structure. It is described by critics as a tangle, knot, or web, in which separate elements can quickly connect and disconnect as in a collage. Like the space of heterotopia, hypertext has an open structure. An electronic text, which is the basis of hypertext, is a fluent form of a code, which can always be re-configured, re-formatted or rewritten anew³⁴. It means that they both undergo constant transformation and do not develop linearly but expand by superimposing new elements upon the existing ones. It can be said that a pattern of an extensive and heterogeneous structure is a universal model in many aspects and areas of post-modern art³⁵.

This kind of structure is described in the theory of "rhizomatic system" – a system dividing in all directions like a rhizome – created by Gilles Deleuze and Felix Guattari. It is very suitable for considering the Internet (network), hypertext, and works of interactive art, especially the ones using elements of narration.

³² This fragment is taken from the lecture *Des Espaces Autres* given by Foucault in 1967. Quote from E. Rewers, *Język i przestrzeń w poststrukturalistycznej filozofii kultury*, Poznań 1996, p. 46.

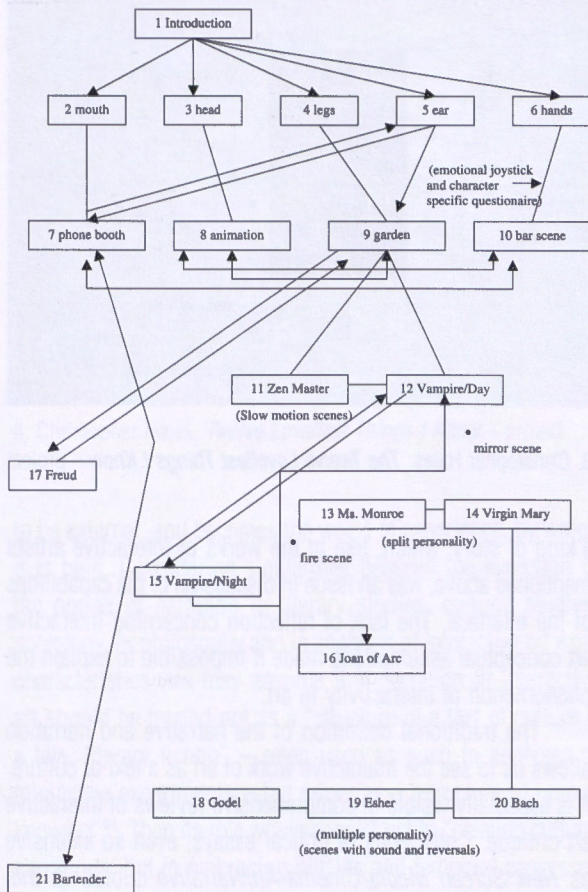
³³ The main feature of the "external space" (the space of heterotopia) was, according to Foucault, co-existence of many incomparable spaces and points in one area.

³⁴ G. P. Landow, *Hypertext as Collage-Writing*, [in:] P. Lunenfeld (ed.), *The Digital Dialectic. New Essays on New Media*, London: MIT, 1999, p. 166.

³⁵ In 1980, A. Toffler wrote in *Trzećcia fala* about "organisation of the future" (meaning government and production organisations), so-called "poly-organisation" capable of adopting two or more different forms according to the situation. This new form with its "network" structure would supplant the current (II Fala) hierarchical structure. See A. Toffler, *Trzećcia fala*, Warszawa 1997, pp. 403–405.

³⁰ See J. David Bolter, *Writing Space. The Computer, Hypertext and the History of Writing*, New Jersey 1991, p. 123.

³¹ D. Sobczyńska and P. Zeidler, op.cit., p. 11.



2. Lynn Hershman, Net scheme for *Making Contact*, the first interactive sexual Fantasy Disk, 1989

First, it would be advisable to systematise and differentiate between seemingly identical categories: labyrinth, rhizome, and web, mentioned by Umberto Eco in *The Name of the Rose*³⁶.

The definition of the rhizome was created by Deleuze and Guattari, describing it as something which has no end and no beginning, is always in the middle, between other things or beings – an intermezzo. There are six main principles of the rhizome: connection, heterogeneity, multiplicity, asignifying rupture, cartography, and decalomania³⁷. The network structure of the Internet and hypertext has a similar structure. They both use a method of dynamic connections, points of intersection, active links, and a temporal yet always accessible, even though dispersed, electronic form.

The Internet network, like the space of hypertext, is built on the principle of collage – it simultaneously joins and divides its often contrary elements, makes semantic maps and visual-textual mosaics dissembled or assembled from separate elements³⁸. Dispersion in the Internet and the ostensible chaos

of hypertext works are systems and strategies in themselves, and that is why they can divide and grow in all directions, constantly finding new links and connections and involving the user in the process of creation.

It is different in the case of labyrinth. Differences between the labyrinth and the rhizome are visible in their construction principles. The classic labyrinth consists of the entrance, the middle, and the exit, but the route leading from one to the other should remain undiscovered. The entrance is a permanent feature, as sometimes is also the middle, but the exit in this setting is secret. The labyrinth's plan is difficult to comprehend for someone who is inside it, while from the outside it appears ordered and logical. The difficulty lies in repeated and parallel elements, and the meaning – in the impossible and unfeasible. The rhizome, on the other hand, is a tangle of paths and threads, which, even if they have something like a beginning, have no end. Certain points lead to many places, some of which are important, some only auxiliary. The rhizome is a structure of infinite links, where the user always finds the proper or other equally interesting route leading to the place s/he is looking for – or some other place.

Whoever finds themselves inside the labyrinth, finds themselves inside the unknown, where they have to establish the direction and reach the only exit. The rhizomatic system of the Internet or hypertext work allows space for points and signs which indicate the right direction. An apparently complex route with no end turns out to be easily recognised and overcome, and in the case of hypertext it also induces the user to leave his/her own prints, which quickly become "intermezzo" – traces of the past. So, in the labyrinth we deal with a stable and concentric structure corresponding to the traditional linear layout; the rhizome and works of rhizomatic nature in the areas of art and the Internet are a "non-linear" collage of active connections, a circular structure and central mechanism serving our memory and actions.

Despite similarities to the rhizome, works of interactive art, especially those of narrative nature, answer to Deleuze and Guattari's description only in certain fragments. They share the principle of connection, which is related to a non-hierarchical structure, where all points are, and must be, connected. Heterogeneity and multiplicity, other key principles of the rhizome, are associated with the rule that each of the points, lines, and connections is equally important and has their own role to play. It is similar with interactive works. Other principle emphasised by the theorists is the principle of asignifying rupture – which in the case of the interactive work may mean points of demarcation – although final, they often also start new narrations or indicate where they begin. Other principles are cartography and decalomania. They both refer to the

³⁶ U. Eco, *Imię Róży*, Warszawa 1991, p. 613.

³⁷ G. Deleuze and F. Guattari, *Rhizome*, Berlin 1977, pp. 4–40.

³⁸ G. P. Landow, *Hypertext as Collage-Writing...*, pp. 156–164.

structure of a map, with its countless entrance points, and criss-crossing and overlapping elements.

The labyrinth and rhizome serve to build maps – “hypertextual routes” of interactive works. They are particularly extensive in the work by Christopher Hales's *Twelve Loveliest Things I Know*. Textual notation shows clearly a tangle of connection points and passages between subsequent elements of the narration. Using the terminology of hypertext theory, one can say that this scheme is a visual notation of this text, which in the actual work is a collection of lexias, its open and dynamic parts, which appear as subsequent and simultaneous images – traces. The difficulty is that it is impossible to comprehend this tangle while using the interactive work, just like we are lost inside the complex structure of a labyrinth. Not knowing the key, we create our own constructions, led by our intuition and curiosity. The user becomes a knowing subject, with a right to make changes, create, and test the work.

Mimesis in interactive experiments, or, truth in progress

The idea of the narrative³⁹ developed by the classic theory of literature is far from the alogical and dynamic narration of interactive art works. Non-linearity and circularity of their structure brings them closer to the phenomena discussed by contemporary narratology.

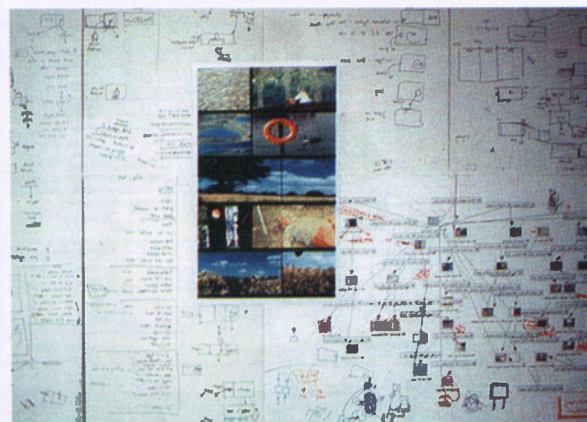
Andrea Zapp notes that the interactive work shifts from the classic mimesis to “being”⁴⁰. Objective understanding is substituted by a temporal notion of human existence. Emphasis on the “temporality of human existence”, procesual nature of knowing and consciousness, and its narrative character affected the discussions about the notion of narration.

The outcome is a wide range of ways of describing this notion, which shows the complexity of the question in the context of interactive art. As Katarzyna Rosner underlines, narration “In works by philosophers, theorists of history, psychologists, sociologists, cognitivists, and psychoanalysts is not a tale, but a temporal sequence of events understood as a meaningful structure, where the process of understanding takes place”⁴¹. Earlier, commentators of interactive experiments in art emphasised the significance of narration as *mimesis*,

³⁹ The term “truth in progress” was taken from the paradoxical approach to the processes of reinterpretation of memories in autobiographical memory, which accentuate or disregard the same event with relation to changes in identity system in a given situation.

⁴⁰ A. Zapp, *net.drama://myth/mimesis/mind_mapping*, [In:] *New Screen Media...*, p. 77.

⁴¹ K. Rosner, *Narracja, tożsamość, czas*, Kraków 2003.



3. Christopher Hales, *The Twelve Loveliest Things I Know* – project

a kind of story, which, like in the works of interactive artists mentioned above, was an issue in discussion of the capabilities of the interface. The lack of reflection concerning interactive art conceptual assumptions made it impossible to explain the phenomenon of interactivity in art.

The traditional definition of the narrative and narration allows us to see the interactive work of art as a text of culture. It is especially visible in comprehensive reviews of interactive art critique. Collections of critical essays, even so extensive as *New Screen Media/Cinema/Art/Narrative* quoted in this paper, including essays by interactive artists, constitute only an index of various genres of the “new tales”, stories told by interactive artists. The classic definition makes it possible to analyse their meaning and structure, but does not help to comprehend the phenomenon of interactive activities⁴².

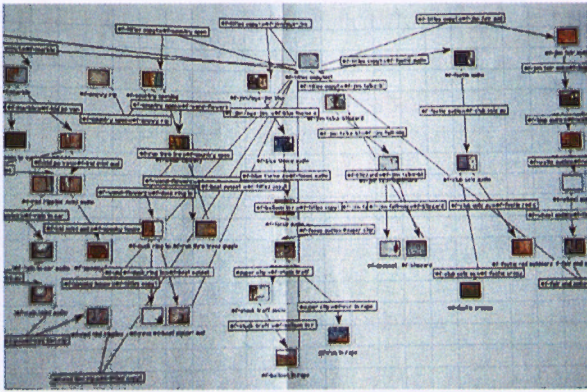
Non-linearity is inscribed in strategies of contemporary narration and “culture of fluidity”. Alicja Kępińska, drawing upon Lyotard, Eco, and Barthes, writes about the narration freed from the duty of producing images and uniform sequences. It can freely pursue “any direction, in any space”, appear in fragments, abandoning its own threads, initiate new routes, or lead to side paths, which end abruptly for no reason⁴³.

Like in a network or hypertext, beginning a journey through the work of interactive art we begin a specific journey into the unknown. What makes up for our lack of knowledge about the work, particularly about its hidden structure, is the fact that we can choose our route as we wish, creating our own, each time original, form of this work.

Apart from the temporality mentioned above, contemporary narratology theorists emphasise the resulting change in perceiving and understanding of the world. It ceases

⁴² M. Rleser, *The Poetics of Interactivity: the Uncertainty Principle*, [In:] *New Screen Media...*

⁴³ A. Kępińska, *Sztuka w kulturze płynności*, Poznań 2003, pp. 108–109.



4. Christopher Hales, *Twelve Lovellest Things I Know* – project

to be external, and becomes the world of experience, by which it is built. Considering similarities between the evolution of the notion of narration in literary studies, cultural studies, sociology, or philosophy and in analyses of interactive art work characteristics, we may assume that narration in interactive art should be treated not as a “structure of a text of culture – a tale, literary fiction” – often used as such in analyses of interactive experiments – but rather as a “structure of human knowing”⁴⁴. Then its role would consist not in “creating cultural narrations, but in embracing our life and temporal processes and events happening in the world in uniform structures of meaning”⁴⁵. Finding the most suitable form in the structure of the open work.

The interactive work structure is a network of interconnected, intersecting and overlapping traces and signs. In this tangle of words, images, and sounds usually creating a fluent construction of narration, causality may exist or it leads the user into dead ends of common illogicalness. The only thing that is certain is the principle of circular structure, which guarantees that the user, traversing subsequent levels and routes, will go back to the starting point. It may happen that during this journey we find new places, which we did not see the last time; more often we come back to the ones we already know. Such experiences await recipients-users of works by Hales (*Twelve Lovellest*), or Norman Klein, Rosemary Comell and Andreas Kratky (*Bleeding Through – Layers of Los Angeles 1920-1986*, 2002). The intricate narration of these projects is not easily comprehended. It may happen that going through succeeding stages of the work, the interactor comes back to the levels and routes s/he has already visited, but usually it produces completely new results and entices him/her to create new areas of meaning. Cyclicity of action is characteristic of

⁴⁴ K. Rosner, op.cit., p. 12.

⁴⁵ Ibidem.

interactive art works. Söke Dinkla tries to describe this phenomenon coining up the term of “circular structure”. She refers to literary works by James Joyce as predecessor of interactive art, and writes that his works are characterised by “a circular structure, which at least partially dissolves principles of traditional logic. In this maelstrom of narrative the principles of cause-and-effect, causality and a progressive conception of history are simply inconceivable”⁴⁶. Dinkla opposes this kind of structure to the model of hypertext and rhizome, where, as she writes, it is nearly impossible that initial and final points could meet⁴⁷. In the case of interactive art works, they contain elements of the rhizome, labyrinth, and “circular structure”, and it is up to the artist to decide how s/he is going to use them.

What is common for interactive art works, particularly the ones with a clearly marked layer of narration, is the way artists prepare the map or rhizome, their structure. Usually it has a certain amount of connection points and a kind of beginning and end, the latter chosen by the user, assuming the part of a tracker or hunter. As in the case of Joyce's works, we are dealing with the work where reality is generated, not represented. This generating is possible thanks to traces-signs left by the artist and discovered by the user. This particular kind of “tracking,” similar to the “immersion” in the Internet and virtual reality, refers us to the theory of Walter Benjamin, who wrote about the need of something more than contemplation in the reception of art, describing this thing as “following the trail.” According to Benjamin, the trail suddenly reaches one, in the process of experiencing something, and whoever follows it, “should not concentrate on one thing, but should pay attention to many things, like hunters do”⁴⁸. This kind of activity makes it possible to see what one would have to miss otherwise and helps to concentrate by stimulating all the senses and one's experience.

The “circular structure” and a system of visible or hidden signs are also present in the prose by Marcel Proust, of which Gilles Deleuze writes that it “penetrates various worlds of signs, ordered in intersecting circles. It is suitable signs which make up the matter of these worlds”⁴⁹. Like Proust's literature,

⁴⁶ S. Dinkla, *The art of narrative – towards the floating work of art*, Art in Inquiry 2001, vol. 3, p. 36.

⁴⁷ Contemporary literature, from Europe and from Asia, often employs the rule of various time strands or multi-plot narration.

⁴⁸ Quote from B. Frydryczak, *Waltera Benjaminia poszukiwanie śladów*, Kultura Współczesna 2002, No. 3–4, p. 37. It would be important to analyse and characterise the role and function of the artist and the recipient in interactive art.

⁴⁹ G. Deleuze, *Proust i znaki*, Literatura na Świecie, 1998, No. 1–2, p. 166.

interactive art works are built through finding and activating subsequent points-signs⁵⁰. Proust writes about human condition, each time presented from a different perspective and point in time, while the world of signs and the structure of interactive art works depend upon a man who sees or uses them. Deleuze writes: "diversity of these worlds results from the fact that signs are not of the same kind, they appear in different ways. They cannot be interpreted in the same fashion and their meaning is never identical"⁵¹. This diversity and similarity of signs can be verified with regard to "the hero's direct belonging to subsequent worlds". The eventual discovery of "time regained" happens through gathering of signs, like passing succeeding points – "trails" in an interactive work. That is how meanings are created in the structure. One can recall *Sonata* by Grahame Weinbren (1991/1993) or *The Surprising Spiral* by Ken Feingold (1991) as good examples of interactive works built on a similar principle. Narration in these works has many layers, is a collection of intersecting stories bound together on various levels.

Paul Ricoeur, whose thoughts on narration have their fullest exposition in *Time and Narrative*, distinguishes three different levels of narration in a work. First, "Mimesis 1" – preunderstanding of the practical field or world of action, "Mimesis 2" – emplotment, transforming an event into narration, and "Mimesis 3" – refiguration of the practical field, a product of interpretation and entrance into the field of communication – adding the recipient's perspective⁵².

Interactive art works seem to belong to the third level of narration described by Ricoeur. It is because of their structure and the opportunity to co-create the work offered by the artist. Coming back to the motto of this paper saying that life is not fiction, as "life is lived, while narrations are told" – looking for links and connections we may find the point where these two realms adjoin, which is COMMUNICATION⁵³.

Contemporary cognitive science theories designate two different ways of establishing communication: transmission and interaction. In the work of interactive art, as we tried to demonstrate, communication is established on the plane of INTERACTION. A communication based on interaction, as opposed to transmission, is interpersonal. According to the theorists of interaction quoted in the first part of the paper, entering interaction and establishing communication is possible when one understands one's own and other people's (whoever they are) significance in the situation. The recipient

assumes the role of the protagonist, determined by meanings and situations created by the artist⁵⁴. The horizon of codes given by the author meets and crosses the plane of the recipient, which is possible thanks to the narrative character of the work. Ricoeur writes that one stage of the process is transforming events into a story, "as if", and then finding a point of connection and communication with the world of the recipient⁵⁵. This set of narration, interaction and communication in the interactive work of art establishes a new horizon in studies and interpretation of contemporary works of art.

Theses by contemporary narratology theorists cited in this paper, referring to such problems as the narrative nature of understanding and knowing, process of perception, and comparing one's experience with cultural plots⁵⁶, are close to interactive art theory. Another field which was only briefly touched upon here is the realm of narration and the problem of interactive art works structure.

Contemporary narratology allows us to characterise the nature of the work of interactive art with precision, and to explain this phenomenon outside the context of technology. This discussion, as we said earlier, may open a new perspective in relating interactivity in visual art to the narrative and advance the proposition (requiring more detailed studies) that every work meeting criteria of interactivity must be also narrative, or, that the open work cannot exist without narration.

In this light it might be possible to explain the meaning of the structure – a conceptual beginning and rules of primary work construction, which in the graphic format often assume the form of mental or graphic maps. These maps, as we tried to accentuate, should be then treated as a recording of potential interactions and creation of stories – metanarrations, which constitute a sort of strategy serving to establish communication. It would be a very beginning of the procesual work, the shape of which changes during the process.

Interactive art has conquered a field of uncertain limits, so far possessed by philosophers, artists, and researches of human mind and social processes. It has opened the perspective proper to a child in a room full of toys, where the suggestiveness of imagination competes with the experience of reality, the author merges with the recipient, and the realism of the interactive work space entices us to join in creating a new world of meaning, with the patience and involvement of a child.

⁵⁰ Here we come back to Benjamin's "traces" and "trails".

⁵¹ G. Deleuze, *Proust / znaki...*, p. 167.

⁵² M. Drwięga, *Paul Ricoeur daje do myślenia*, Bydgoszcz 1998.

⁵³ K. Rosner, op.cit., p. 136.

⁵⁴ H. Blumer, op.cit.

⁵⁵ P. Ricoeur, *Język, tekst, interpretacja*, Warszawa 1989, p. 157.

⁵⁶ K. Rosner, op.cit.