

SHORT PAPERS

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INTO THE BLACK BOX

relations between artistic expression and formal descriptions in computer based fiction and art

black box: any unit that forms part of an electronic circuit and that has its function, but not its components specified

Webster's Encyclopaedic Unabridged Dictionary of the English language

"a technical invention can never resolve a problem in art; it can only state it, so that it can be resolved by a second, properly aesthetic, invention. This is the well-known dialectic of long-term progress and short-term regression"

Étienne Souriau

Summary:

In this paper I will describe formal descriptions as a material for interactive and non-linear artistic expression. The relation between formal structures and traditional means of expression in 4 Danish experimental works are outlined to give concrete examples.

Keywords: non-linearity, interactivity, formal descriptions, artistic expression.

Formal descriptions and artistic expression

Digital media confront the author and artist with a new material for artistic expression. In principle every single sample in the soundtrack or pixel in the image is generated or manipulated after certain rules and descriptions expressed in a programming language, which can happen automatically or through interactive response from the reader/viewer. My point of departure is the thesis that formal descriptions of the used representational material is an integrated part of the fiction or artwork, if it includes interactive and non-linear means of expression. Even though the concept of interaction and non-linearity in many ways challenges our understanding of traditional fiction and art, some of its basic characteristics are quite easy to define in semiotic terms. If you see the artwork or the fiction as expressions interpreted by a reader, interactivity gives the reader the ability to influence the expressions physically and non-linearity describe the change of their order and nature.

In the process of interpretation the reader assigns content to the expressions, which in this case is the used material e.g. tactile feedback, video, graphics and sound, the readers actions and the changes performed by computation. In computer science the terms recipe and ingredients are often used to describe algorithms and the data they process. Using the recipe as an analogy to the programme script, the artist or author will have to write recipes ensuring that the ingredients are manipulated and combined in a way that is artistically acceptable involving both content and expression. Not many artists working with traditional linear media believe

this is possible, because the idea that you can create explicit descriptions of artistic expression is believed to be absurd. The further the artist dives into the world of the programmer the more nuanced and complex the non-linear structures and the interactivity can be. The main problem in this process is that it involves a level of abstraction that removes the focus from the material presented to the reader. An example is complex non-linear works, where the programme script can generate more readings than the author or artist will be able to experience.

For the same reason many works of interactive fiction and art that have caught the attention of critics dealing with traditional media are often classified as gimmicks, simplistic or just lacking general appeal. Books, films and paintings normally speak for themselves, whilst descriptions of their content and nature are made by their audiences, critics and academics. The artistic genius is often described as the person working mainly from intuition and talent combined with technical skills and analytical distance to the work

I stress the point that the new challenge is the creation of explicit descriptions, since they define the non-linear and interactive effects actualised on the computer. But this does not mean that we will have to give up judging the traditional means of expression actualised in each linear reading from the criteria developed within traditional media, e.g. graphics, video art, film, animation, drama, or comics. Many works suffer from the fact that the focus is on the complex formal descriptions controlling the expressions, which often makes the outcome conceptually interesting, but poor compared to traditional media. On the other hand works that do possess artistic qualities in traditional terms often do not succeed in integrating interactive or non-linear means of expression as a vital part of the work.

To do so the formal descriptions and the actual audio-visual manifestation must be seen as interdependent and unique to each work. If the quality of interactive fiction and art has to match the high standard seen in traditional linear media, artists will have to invest the same attention to the creation of formal descriptions for programme scripts that they pay to the traditional material they master.

The structure behind 4 Danish experimental works

From a practical point of view the focus must be on the way the elements of the work can be manipulated and what function the manipulation has in the artwork or narrative. In the following this relation is illustrated by 4 experimental works.

The Cliche generator

The cliché generator is a self-transforming animated collage created by the Danish computer artists Jacob Schmidt and Jacob Tekiela in 1992. They used the facilities in MacroMind Director 3.0 to integrate and manipulate sound effects, digitised graphical material and simple texts about modern life. The script executing the transformations is built on a principle of symbolic juxtaposition of the elements in a sequence of varying duration. The elements, grouped in 4 general themes, are selected and manipulated by a controlled degree of randomness. The collage merges slowly through the different themes starting out with basic values (food, sex and family) to organic matters (the body and nature) to consumer culture (tourism, media and advertisement) to technology ending up with war and death. The elements are manipulated automatically in several ways inspired by the change in the seasons through change of the order, the palets, the sound, the movements and the speed.

Two stills from a sequence The texts say (mother, easy) and (well fed, natural).

The unpredictable interplay between the textual and the graphical clichés about modern life create series of collages with a content spanning from humouristic to serious statements. The quality of the collages is secured by developing a graphical style in the process of pre-editing the integrated material, making it suitable for manipulation by the script as backgrounds, animations, pictures and texts. In this way the integrated elements and the script are created on the basis of a formal description of compositional rules and signifying elements in traditional collage.

Lailah

Lailah was created in 1992 by Stine Schou and me with the main aim to create a poetic interactive experience and to introduce the notion of responsibility in interactive art. Lailah is a room installation presented at ISEA 1994 with a manipulable projected image and 3-channel sound that can be manipulated. It includes photography, simple animations, background music and recited poetry. The structure behind Lailah resembles the cliché generator in that it is a collage where the elements are manipulated by controlled random selection. But here the focus is on creating formal descriptions of the interplay between the spectators actions and the audio-visual feedback on an emotional level. The spectator can touch the image of a naked womans torso with a transparent coloured dot and change the colours of the flower petals covering the body. The response consists of recited poetry and single words arranged in positive and negative paradigms based on common connotations to the actual colours used - blue, red, green and yellow. Other features are animated flies or a spider introduced among the flower petals if the user response is too instrumental or vulgar. This is registered and executed by a script analysing the speed of the spectators movements, the places clicked and time spent in different areas. In other words the script contains formal descriptions of our interpretation of how the readers' actions reflect his or her interpretation of the work.

The feedback to these actions is based on a formal description of how an atmosphere of serenity, moodiness or horror is created.

The Improviser

The improviser is the result of an experiment carried out by dramaturgist Jørn Buch and me in 1993. The idea was to create a montage-technique and formal descriptions for non-linear videomontage that will establish contact between randomly chosen videosequences of two actors improvising individually. Based on studies of gestures and facial mimic 160 video sequences (60 with each actor) were organised in groups according to the direction of the actors attention. Each individual sequence was analysed according to the actors' activity based on the 3 different forms: observation, evaluation and reaction. Then they were indexed by timecodes, which enabled the script to distinguish between the different forms of action. In the playback two randomly picked sequences are played at 9 different possible locations on the screen, ordered after two main principles. The first principle is that the actors always direct their attention toward each other via gaze or gesture. The second principle is that when one actor is reacting the other is observing or evaluating.

The structure behind the Improviser is an example of how detailed formal descriptions of facial mimic, gesture and actions in drama improvisation can form a basis for non-linear videomontage. The performance generated by the programme script is not comparable to real drama improvisation filmed on video. This particular technique is developed for further experiments with interactive fiction and videomontage inspired by

the aesthetics of collage, experimental film and art video.

SimExistence

SimExistence is a sketch for an interactive comic created by Space Invader Yvonne Meyer in 1995.

SimExistence can be described as a conventional comic that adds animations, background music and simple interactive choices to the conventional graphic repertoire. The interactive choices and non-linear sequences are written in a style known from adventure games, where simple choices determine the storyline. The difference here though is, that the story is narrated and drawn by a comic author knowing how to express the results of the choices in a dramatic and exciting way. Furthermore the interactive choices are skilfully integrated with the detailed graphical world of the comic, which makes the different situations in the narrative worth experiencing more than once. This problem is also solved by giving the reader a randomly chosen personality inserted randomly in time and space in the narrative each time the work is experienced.

SimExistence is a work-in-progress, and the task of the author is to draw characters and settings that match the storylines and interactive narrative choices generated by the script in a way that the quality of the outcome is comparable to that of her linear work.

Conclusion

Non-linear fiction and art can only become an art form in its own right, if the new means of expression are used to create meaning and experiences with a point of departure in traditions established within traditional media. Since a substantial part of the representational material is based on audio-visual material known from traditional medial - images and sound - the artist must be able to handle both traditional media and the new means of expression in combination. This means that the artist or author as part of the creative process has to enter the black box, getting to know its components and specify its functions on their own terms - both in the world of the reader and in the world of the programmer. This is an necessary step in creating art and fiction that manifest an aesthetics and a poetics unique to interactive and non-linear works.

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