The Passage from Material to Interface

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ABSTRACT

This article describes the transformation from material to interfaces in the artwork based on the text "The Passage from Material to Interface" from Louise Poissant. Louise Poissant wrote about the quality characteristics of material and the transformation of material to an Interface. In relation to this transformation we discuss the tree constituting poles of art. A further issue is the influences of language pragmatics for art movements. Furthermore the text explains the requirements which an artwork must meet to be an interface. Another argument in the text is the function set of interfaces. Based on these definitions we explore the tasks for new media artist for our future life.

Keywords
Art language openness technology interfaces history

1.   INTRODUCTION

Many conceptual steps and the technology evolution had a big influence into the art world. These big changes reconfigured the art world through a series of iconoclastic gestures. The iconoclastic gestures introduce new materials from the industrial world and everyday life. These new materials had mainly their origin in the domain of communications and technology. The artists had a new inspiration: the immaterial communication.

This movement is based on three constituting poles describing the artist motivations.

1.   The commitment of the artist to represent his or her vision of the world, emotions etc.

2.   Work on their material itself. Use materials in a new way, be innovative

3.   Use the new material to reorganize the ordinary relationship between artist and spectators

The aspect of reorganization depends also of the choice of the material. There exist no innocent material. That´s the reason why the artist should choose a material very carefully. Every material defined a special set of emotions, perception, questions and answers. In this case the phrase of McLuhan is very appropriate "We shape our tools and afterwards our tools shape us." Nowadays web portals like Twitter and Facebook show how up-to-date this phrase is. We built these kind of applications to find a more effective way to communicate but now it forms us how we communicate between each other.

2.   The Intellectual Climate
It is important to look at the intellectual and cultural context of this era to understand the creation of the interface concepts. Wittgenstein laid the foundation stone with his definition "logic to philosophy of language" for the new evaluation approach of artworks. Wittgenstein emphasize the notion of action and

especially the constituting roles of context. On this train of thought J. L. Austin, Charles Morries and Francoise Armengeaud evolved their more detailed language models that all use these notion of context. So it was good that the three basic concepts of language pragmatics of Francoise Armengeaud found an echo in the art world. It describes in an abstract way how spectators perceive interfaces or interactive systems.

- *The concept of act:* The notion of interaction, of transaction

- *The concept of context*: The situation in which the act take place

- *The concept of performance*: The accomplishment of the act, which allows actualization of competences

These concepts are very similar with "The Open Work" concept from Umberto Eco. It shows very clearly the thinking of art in this time and how valid it still is for interactive and media art nowadays.

These intellectual concepts stimulated the artists to replace the "aesthetics of taste" with the "aesthetics of action" in their artworks. That change and the new characteristics of these materials generate a bigger benefit for the whole artwork. The spectators and the artist join the creation process together. That is the point why such kind of artworks can produce a bigger experience and   meaning for the whole society than the old non-interactive artworks

3.   The Forerunners of Art
The first artists of the movement were Bruno Corra and Arnaldo Ginna. Their artworks in this era were very stage-based. They worked a lot with (light) projection. The interest aspect of these first open stage-based artworks is that the software tools for New Media Artist like Adobe Director and Adobe Flash are still working with the metaphor of a stage and scene in their IDE environment. Further interactive artworks between 1950 and 1960 were succeeded by Alan Kaprov, Nam June Paik and Raduz Cincera. These artworks compared to the current interactive art project had a very low degree of interaction. In contrast their vision of openness for artworks influenced the art world in this time so much, so the interactive and media art was able to evolve like today. Today media artworks delivers a big scope of interactions. The spectators can choose between different options. In this relation Louise Poissant is right to say we were moving from an interaction between two system to an **alteraction system**. A system which offers different alternatives for the spectators.

4.   The Interface

Now we got in touch with the concepts and evolution of interaction and openness in the art world. We are also able to understand the requirements of an interface between human and

machines. Louise Poissant defined six principal categories describing the concept of an interface very good.

- Sensors (input channel)
- Recorders (memory of the interface)
- Actuators (The logic of the system)
- Transmitter (transport channel of the information)
- Diffusers (output channel)
- Integrators (the context or the space in which the interface is included)

4.1　Sensors

The sensor category combines all input possibilities of an interface. Datagloves, microphones and different multiple sensors for force, light, heat, etc. belongs to the category. In general we can say the sensor category works in the same way as our human body senses work.

4.2　Recorders

Recorders like a photo camera or digital memory stores the data of the sensors. On human perspective the recorder category is like our human brain. It stores all our input data. In some cases the obligatory character of the recorder is not obvious. Also in the definition of recorder from Louis Poissant it is not evident. Every interface stores data for a certain time even when a sensor transmit the data to a micro controller. This process of transport of data via e.g. a cable needs time. In this time the data is stored in the cable. So the cable becomes the recorder. If we look closer behind the idea of the example of the cable we can see that the recorder has a big connection with the notion of time how we perceive this information. The recorder is able to extend our human cognitive system.

4.3　Actuators

The actuator of an interface procure a certain autonomy in a system and manage its exchanges with its environment. In this category the artist can integrate the logic of the concept. The actuator has a big influence how well the artwork performs. Is there something wrong in the artwork, the artist can check this exactly in this category.

4.4　Transmitter

The transmitter is a transport system for information. This transport system and the idea of a transmitter often revolutionized how human communicate to each other. The inventions of electronic communication technologies like fax, television and the internet redefines every time our concepts of time and space (in our daily life).Sometimes we should consider that the time and space is still existing and in this notion the transmitter can also become a recorder! When this happened the characteristics of the category recorder are also valid for the transmitter.

4.5　Diffuser

The diffuser is nothing else than a feedback channel. It defines in which medial form we perceive the feedback. It could be for instance a 2D picture, a sound or a haptic feedback.

4.6　Integrator

Every interface is used in a special kind of environment. The integrator category takes the responsibility for this environment. In this case the environment is very important. If this is not well chosen the artwork is going to fail. As aforementioned the context plays a big role how the spectators perceive the artwork.

In a summary these categories give the artist a very good guideline and understanding how an interface works and what the artist has to take care during the creation process of the artwork.

5.　The Five Functions of Interfaces

The last forty years interfaces become increasingly natural. Technology becomes smaller and almost invisible but the intention of interfaces are almost the same. Artist mostly aimed their artworks to the five functions: extendible, revealing, rehabilitating, filtering and synesthetic integration.

5.1　Extension

For a long time the human creates interfaces like a microscope to extend our cognitive apparatus. Interfaces with an extension character delivers us new perspective and possibilities. In my opinion Louis Poissant is right to say that clothes which are already extension interfaces for the human will play a new big role in the future life of human society. Everybody from the interaction design and user experience discipline talks about the mobile revolution and almost forget the underestimated topic wearable technologies. In my opinion the mobile device technology delivers not so much room for experiments than the wearable technology for the artist. Clothes became so natural for our human culture that there is enough space to create new emotions, questions and experiences.

5.2　Revealing

The function of revealing is strongly connected to extension. Every extension contains reveals function. In relation of this the function of extension can not live without the function of revealing and vice versa. In my opinion Louis Poissant doesn´t explain the relationship between function of extension and function of revealing obviously.

5.3　Rehabilitation

According to Louise Poissant "Interfaces operate also on a rehabilitation of forgotten, neglected, or lost sensoriality. As such, they restore or reestablish ways of perceiving, inciting one to connect differently others and the world". In my opinion his definition is weak. Rehabilitation is always a kind of extension of the human body and cognitive appartus. Of course we use interfaces for rehabilitation but it is always a sub form of extension. By imitating the function of the human body we realized how incredible complex our human body is.

5.4　Notion of Synesthesia

The notion of synesthesia is often used by artists to create new kind of experiences. Louise Poissant´s definition and examples explain very clear how synesthesia works and how it is applied. It is totally right that synesthesia combines to systems with each other. We can see it at the avatar culture in Online Communities

and in the interaction between more sensor systems to each other. Additional to these points he is also right that this function of synesthesia will play a major role in the future of new media art. New Media Art delivers the perfect material to experiment and evolve this notion of synesthesia.

5.5   Filtering

The industrial revolution has developed our society to a culture of profusion. The internet emphasizes this movement. Now we have a profusion of information (pictures, sounds etc.), products and freedom. We need interfaces filtering all this information and reproduce them in less information weight. Refer Louise Poissant the abundance does not stem our anxiety. New forms of anxiety appeared on our society well known as"depression". In my opinion the high increasing rate of "depression" is strongly connected to this function of filter. We got to much (useless) information and we could not see the basic concept anymore. The result of this abundance of digital and physical goods is disorientation. The feeling of disorientation can cause depression. That is the point why we need urgently good filters in our daily interfaces. How this filters should work is one of the most important task of the artists. Artist are one of the masters in creating the right questions for the society. Their questions can inspire scientists to create the right filters for our society.

6.   Conclusion

The text of Louise Poissant points out how the interfaces evolved in the art world and which kind of topics are important for a new media artist. It described the functionality and the working processes of interfaces. Additional which kind of new tasks the artist has to deal with.

7.   REFERENCES

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