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Interactive stories in terms of form and engagement

アン・メッテー・ソルホージュ

Anne Mette Thorhauge

中津 良平

Ryohei NAKATSU

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ATR 知能映像通信研究所

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Anne Mette Thorhauge Ryohei Nakatsu

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#### Introduction

Due to the kindness of several benefactors I have had the opportunity to spend three months of work at the busy locales of MIC. First and foremost Dr. Ryohei Nakatsu has kindly accepted my presence in these surroundings. Furthermore Tele Denmark has consented to pay my expenses during my stay as well as the University of Copenhagen has added the means necessary to purchase the airplane ticket. Jointly, this has made possible three inspiring and eventful months from which I will surely benefit now and in the future. In the present report I will present my work as it has taken form during my stay. Hopefully the different parties making this work possible will as well gain from its different parts.

I will begin this report with an introduction to MIC followed by a description of my activities at this place. Subsequently I will conduct a more detailed discussion of the theoretical perspectives present in my field of interest: the interactive story. In order to make this report a manageable reading experience I shall try to stay within a reasonable number of pages.

#### 1. What is MIC

MIC stands for Media Integration and Communications research laboratories. It is a department of ATR - Advanced Telecommunications Research institute that is housed among rice fields and small forests in the Kansai Area of Japan.

ATR was established in 1986 in order to promote research and development activities in the field of telecommunications. Its economical finance derives from the industry as well as academia and government. Apart from MIC ATR recently includes the departments of ITL (interpreting telecommunications research laboratories) HIP (human information processing research laboratories) and ACR (adaptive communications research Laboratories). The activities in these departments cover a large variety of researchers as ranging from development of fundamental technologies over voice, face and gesture recognition to research in areas as artificial intelligence and life.

The principle aim of MIC is the pursuit of new communications schemes made possible as well as necessary by the advent of new communications technologies. In practice this has led to research and development activities in a variety of subjects including new communication environments, autonomous agents, human communications sciences and virtual reality technologies. Furthermore MIC is housing the art and technology

project to which I have been connected. A couple of illustrative examples might describe the background on which I have been working with my own ideas:

Sidney Fels strange but fascinating devices emphasize the importance of regarding interactivity and representation in new terms. For instance the Iamascope - a kaleidoscope endowed with the capabilities of the new technologies - allows its participant to create patterns and music through his spontaneous movements. Different from more common interactive devices this piece of work brings into light the perspectives in the creation of direct involvement unstrained by the intermediation of a mouse, keyboard or joystick. Furthermore this work indicates a new perspective on representation as deriving directly from the source of interaction which I find highly inspiring.

Correspondingly Naoko Tosa, Ryohei Nakatsu, Takeshi Ochi and Joy Nicholson s interactive movie project focuses on this element of spontaneous interaction in relation to the unfolding of an interactive story. Through computer graphics, 3D observation and various speech and gesture recognition technologies this system allows the participant to create spontaneous action in a story environment while he is at the same time guided through a story with many possible developments. Thus a combinations between spontaneous interaction and a more structured story line. This project displays the potentialities as well as the difficulties in rethinking stories in terms of the new media. Particularly the focus on direct and spontaneous interactivity rather than multiple choice - interactivity (that is, interactivity as a question of choosing your way through a set of pre-scripted events) is of importance in this relation.

These examples are definitely not representative of the totality of activities taking place at MIC but they indicate some of the sources of inspiration that have influenced my work as well as some of the directions that are recently investigated within this area. Other activities worth mentioning could be the recent research on intelligent agents, flexible learning environments as well as the more general focus on the emotional aspects of communication in the computer medium. I would now like to focus the projects in which I have taken a more active part.

### 2. My activities at MIC

My activities at MIC have generally taken place at the conceptual level since the projects in which I have been involved have not yet reached their more tangible stages

of development. However, this has not decreased the work effort since a considerable number of discussions and considerations have proved necessary in order to get a hold on the multitude of perspectives comprised in our work. The main part of these activities has been in relation to the project vital presence headed by the Australian sound artist Rodney Berry and furthermore counting Gavin Wong, Joy Nicholson and Cedric Laruelle (and me).

Rodney Berry s earlier work consist of a number of artworks involving sound - in this relation most notably feeping creatures that combines the idea of interactive sound sculptures with the idea of artificial life generated through computer technologies. Feeping creatures is a real time running virtual world inhabited by virtual creatures taking part in a perpetual and autonomous development of life and music. Correspondingly his project at MIC has as its primary agenda the question of artificial life and how this is created in the computer medium. Thus, his work at MIC consist in the development of an autonomous virtual environment inhabited by autonomous creatures, partly related to that of feeping creatures partly aiming towards a higher degree of interactivity in relation to the participant.

In accordance to the relatively early stage at which the project is still to be found my main activity has been to take part in meetings and discussions. My approach has been the means of story construction at the participant s disposal. That is, with which means can we support the participant s mental construction of meaning and story during interaction in order to improve the emotional effect? Though this approach in the moment I am writing seems to gain less significance in the general work, discussing this and other aspects of the environment has certainly contributed to my understanding of my own field. Particularly my reasoning concerning the different levels of interactivity and how they affect types of story construction derive from these discussions (1).

Moreover, during the last few weeks of my stay I have devoted some more thoughts to another and fairly different project. Drawing on his educational background in history and computer science Alexander Kressig has set out to create a historical learning environment based on 3D graphics and role playing principles. The environment should thus constitute an interactive historical world for the participant to explore while this interaction should take place in relation to a role playing structure, that is, a number of players acting out different roles controlled by a dungeon master (represented not by the program but by a person in flesh and blood) holding a more general view of the

totality of actions as they converge in the environment.

Though this project is as well to be found in its very early phases (holding responsibilities in other relations Alexander has had to postpone it for a while) I have had rich opportunities to integrate this rather different approach in my considerations. Furthermore the project has served as an important reference concerning the more practical aspects of my work - how to move from a strictly theoretical framework to some actual principles of story construction. Thus, this project has as well contributed to my more general considerations.

To sum up, a considerable part of my activities at MIC has consisted in the participation in various meetings and conversations mixed with occasional talks and demonstrations and then, of course the investigations I have been conducting on my own. Along with my participation in different contexts I have been trying to create my own theoretical framework in order to reach an understanding of the interactive story as an independent phenomenon. Thus, this work is partly born out of the activities described in the previous sections, partly out of my individual work in the field. I would like to devote the rest of this report to the conclusions and discussions I have reached in this relation.

#### 3. Discussions and conclusions

As it appears in the previous sections my work at ATR has mainly been limited to theoretical considerations since there has not been many chances to try things out in a more practical manner. Thus the main result of the previous three months is a number of theoretical concepts and perspectives that might be of value in the practical production of interactive stories as well as in further investigations on the matter. In the following sections I will present my discussions and conclusions in accordance to the virtue of brevity though I shall be pleased to engage in a further discussion with anyone interested. My contact address is to be found at the end of the report.

#### My approach to the interactive story

Stories in their various forms have been a popular topic within a broad range of disciplines during the recent decades. The story as a fundamental principle of sense-making has appeared within psychology (Bruner), leanings sciences (Schank) and recent research in the field of artificial intelligence and autonomous agents (2) to mention a few. In the present work I intend to work with the story in a fairly broad sense, that is, as a particular way of organizing experiences and actions. For instance, in relation to the work presented here it does not make much sense to distinguish too

sharply between stories in their more traditional forms and in various computer games displaying a sort of story organization. Both count as stories though, as we shall see, not necessarily in accordance to the same type of logic.

My main focus is directed towards the formal and structural aspects of the interactive story as it might appear in different contexts (games, learning environments and the like). Thus my aim has been to discuss and define some of the elements that (might) constitute and shape the interactive story - a task that obviously involve considerations concerning the organization of a story environments as well as the ways in which the participant might interact with these.

In the following sections I will first try to define the basic features of the story. From this basis I will make a distinction between two basic story categories and relate these to different levels of interactivity. Finally I will try to involve the concept of play as a possible perspective on the dynamics of the interactive story in specific relations.

#### What is a story?

An understanding of the interactive story presupposes a conception of what story basically is. This is not as easy as it sounds. However, at its most basic level story can be described as a certain type of logic, a particular set of principles present in the way we make sense of the world. This, of course, is not a very surprising conclusion.

The story as an innate characteristic of the way we percept the world and interact with it has for a long time been a general topic in several disciplines as for instance narrative psychology and the learning sciences. The element of story is present in the way we tend to perceive our surroundings through principles as intention and causality (3) as well as the way in which we hold and exchange our knowledge about the world. For instance is our knowledge and memory most often stored in the form of stories as well as meaningful conversations tend to take the form of story-exchanges (Schank and Osgood 1992)

Story in these terms is ordering principles as connectedness, sequence, causality and intentionality. Furthermore these principles seem to be present at all levels of story generation from the way we make sense of world politics to the classical Hollywood film. Both imply intentional agents striving towards specific goals in a world governed by certain rules. However, for my purpose I have found it useful to make a distinction

between two basic categories of stories representing to very different types of story dynamics - interpretational and representational stories

#### Interpretational and representational stories

Keeping in mind the definition of the story as a certain set of principles any human activity may be defined as story insofar it is interpreted through these principles. Our interaction with and perception of the world tend to generate stories. I will call these stories interpretational stories in that they basically are the result of our interpretations of reality. All stories can be said to hold this characteristic. However, representational stories furthermore hold the characteristic of having a material form - different from being a set of actions they represent a set of actions regardless of the medium in which this happens to take place. In a certain way the representational story is an externalization of the former category - interpretations of the world put on material form. Being closely related these two categories share important features while they do also differ at an important one. The formal aspect of the representational story endows it with a particular temporality not necessarily present in the interpretational one.

#### Interpretation, representation and temporality

The interpretational story appears at all levels of our lives in the past as well as in the present. We make sense of our past through story principles as well as we understand ongoing matters as stories as we engage with them (See Brooks 1984 chapter 1). In opposition to this the representational story seems to have one basic temporality which is that of retrospectivity. It is important to emphasize that this is not in accordance to the story content as much as to the fact that a representation comes after its matter (chapter 4).

During the decades several theorists have emphasized this peculiar temporality of the representational story. Walter Benjamin ( the storyteller ), Sartre ( les Mots ) and most recently Brooks ( Reading for the plot ) have regarded the novel in these terms. The reason is that the novel and more generally the representational story seems to gain its entire dynamics from this temporal phenomenon. In Brooks terms we read for the end. We read for that decisive point where the seemingly random events of the story will reach their final and determinate significance. Though we do also want to postpone this final point in order to let the story reveal itself a little more. This dynamics between postponement and closure, life drive and death drive (4) rests on the preexistence of the end caused by the retrospective nature of the representational story. In Aristotelian

terms the beginning, middle and end are not just successive events in a sequence but interrelated fields of force in the unfolding of the story. In this relation the end plays an important role endowing the beginning and the middle with their particular mood and significance as story events.

Story as representation gains its dynamics from its temporal features. However, it is not very probable that these dynamics are similar in the interpretational story as it unfolds in real time. An interesting question is thus from which formal or structural aspects the interpretational story gains its dynamics. However, before I enter this topic I want to include the interactive story in the discussion.

#### The interactive story

A very general definition of the interactive story could be that of a story that includes the actions of its recipient in its formal structure thus turning him into a participant. From this point of view the interactive story is nothing more than a particular version of the interpretational story.

However the interactive story can integrate its participant to varying degrees with varying consequences for the nature of the story experience resulting from it. It might thus be valuable at this point to introduce some terms with which to distinguish between the multitude of story formats appearing within this area. My humble suggestion is to regard the phenomenon in terms of the continuum between navigational and participatory interactivity. For instance do hypertext novels (5) certainly count as interactive stories though the interactivity is limited to a navigational/spatial phenomenon whereas MUDs - multi user domains (6) - make possible a more participatory interactivity. I would like to emphasize that I do not work with these terms in relation to specific program characteristics but at the level of story experience (7). Thus, a second person address in a hypertext novel might be enough to throw a participatory perspective on the story experience.

My point is that the respectively navigational and participatory levels of interactivity are of considerable importance to the way in which stories are made to cohere in the mind of the participant. Thus at the level of purely navigational interactivity the participant will choose his way through a set of pre-scripted events. In this position I find reason to believe that his mental activity will be fairly related to the one activated in relation to the representational story. Or rather: at this level it still makes sense to include theories

from this field in order to make sense of the story construction. However, while the dissolvement of the representational story at the level of navigational interactivity seems to be a spatial matter, the entrance into participatory interactivity also gives the story a new temporal quality. That is, the story does no more exist as a structure to be experienced by the participant but has become synonymous with the spontaneous actions of the participant. For this reason the temporality of the story will gain a new character - it will unfold simultaneously with the actions of the participant.

As the participant gets the feeling of actually participating in the story, the story will also gain another character of being acted out in real time. This new position and temporal quality make it less obvious to discuss the interactive story in terms of narrator/narratee and the mental filling out of gaps (8), at this level it would rather make sense to include some characteristics of the interpretational story as it unfolds in real time.

Thus, in accordance to my reasoning this far the interactive story can be regarded partly in terms of the representational story partly in terms of the interpretational one depending on the type of interactivity it offers its participant. In the following sections I will focus on the latter.

#### Introducing aspects of interpretational stories

To sum up: the dynamics of the representational story can be viewed in terms of its temporality. These dynamics are to some degree brought into question with the spatial dissolvement of linearity in the hypertext novel. However as we move further along the line towards participatory interactivity we will also have to deal with a radically new position of the participant towards the story. Shortly, while at the former level it still makes sense to discuss various strategies of meaning construction in the relationship between the participant and the text at the latter level the participant and the text seem to merge: the story is synonymous with the actions of the participant as they are enacted in real time.

There are several challenging aspects to this situation and I would like to focus on two closely related ones. The new temporal characteristics force us to consider new approaches to the question of story form and structure as well as these story forms and structures now ultimately depends on the way in which the participant engages with the story. An option is thus to take into account the aspects of the interpretational story and

how this works in relation to structure and engagement.

Of course, in accordance to the previous definition the interpretational story is always and everywhere which to some degree can make it difficult to see the wood for trees. However, at certain moments individuals, groups or entire societies engage in activities that interpreted as stories might reveal something valuable about the formal and structural parts that could possibly shape the interactive story. What I would like to investigate closer in this relation is the phenomenon of play and how its structural and performative aspects might contribute to an understanding of the interactive story at a participatory level.

#### Play as a perspective on the interactive story

The activity of play is generally practiced for its own sake in accordance to its own logic constituting its own specific reality. Furthermore play can be regarded as a meta activity, a comment on reality, reinterpreting the world from which it arises (9). These characteristics turn play into a possibly valuable perspective on the dynamics of the interactive story and this includes the aspects structuring the activity of play as well as the individual s engagement in this activity. In the following two sections I will briefly outline some considerations in this relation.

#### Structural aspects of play

Which elements shape play as activity? In accordance to Piaget elder childrens and adults play are basically characterized by rules. As younger children during their development engage themselves in action play and symbolic play elder children and adults release their play potential in games with rules ( Play, Dreams and imitation in childhood 1962 chapter 5). It is important to emphasize that this does not concern the content of play. Play can cover any sort of content and meaning, but its basic structure, at least in accordance to Piaget, is one of rules. The centrality of the rule might as well be of value as a structuring element of the interactive story.

If the concept of play is extended to include phenomena as sports games and computer games, some further characteristics can be added to the discussion. Closely related to the concept of the rule is that of the role. Entering a set of rules often implies taking on a certain role (10). Thus it is worth noting the centrality of the role in various examples of computer games, particularly adventure games (11) and MUDs that do also at the same time represent quite elaborated examples of interactive stories. The role is here a

structuring element as well as a crucial way of entering the world of play. In the same context we find the goal as a central structuring element. The goal serves as a general frame of interpretation that units the various elements of an action as well as the goal constitutes a certain drive in the action a force that makes the thing move.

Finally I would like to note how spatial and temporal restrictions might now and then shape the activity of play and endow it with a certain quality or mood. As some games tend to take place at certain places, other games gain their entire logic from the limited temporal period in which they are enacted. This logic seems to be present in certain types of sports games as well and national and international politics, particularly as they are presented through mass media, tend to follow this logic (10).

Unfortunately I have as well been subject to certain temporal constraints that have prevented me from conducting a more extensive investigation into this matter. However rules, roles and goals as well as the possible value of spatial and temporal limitations might serve as useful temporary concepts approaching the interactive story. These concepts though, can not be regarded separately from the part of the participant. An understanding of the dynamics supporting the interactive story presupposes and understanding of how the participant integrates his own person in this structure.

#### Performative aspects of play

In The ambiguity of play (1997) Sutton-Smith calls out for a theory of play that takes into account its performative aspects as well. Drawing partly on Batesons conception of play as a meta-activity (see note 9) he suggests an approach that might clarify parts of this phenomenon. Thus Sutton-Smiths conception of the dialectics of play might prove helpful in this context.

The dialectics of play bring into consideration the ambiguity characterizing the act of playing. Sutton-Smith thus distinguishes between two sorts of dialectical relationships: ludic and referential dialectics. Referential dialectics refer to the relation between mundane and virtual reality in the act of playing, how mundane reality is recycled and reinterpreted in the reality of play. Ludic dialectics refer to the attitude towards the structuring elements of play: the rules. The act of playing is at the same time to tolerate and follow the basic rules constituting play as well as to assume a playful attitude towards these rules, to investigate their limits and potentials and to conduct them in new ways (12). If we retain Piagets conception of play as pure assimilation (1962), that is, as

the free play of the ego escaping the constraints of reality, the referential and ludic dialectics could be regarded as the player s act of imposing his own individuality onto matters in other relations existing outside the limits of his power.

Thus, if the role is included in this set of assumptions it might serve as a useful perspective on how the participant might integrate himself in the structure of the interactive story and with which ends. While the participant at the level of navigational interactivity finds himself in a somewhat distanced position towards the story with which he is interacting, the participant at the level of participatory interactivity might exactly take advantage of the opportunity to be inside the story as well as outside it at the same time. If the concepts mentioned in the previous section - and particularly the concept of the role - are regarded in relation to these dialectics they might serve as a useful perspective on how the interactive story unfolds in real time through the actions of the participant.

Moreover I see interesting perspectives in introducing the concept of representation once more at this level. Representation then, should not be regarded in terms of temporality but in terms of metaphor, that is, its being instead of something else. Representation thus enables the individual to extend the depth and range of his activity just described through the opportunity of distancing himself from the matter of his manipulation - step out of his own person (see note 10). Furthermore this activity reach new potentialities in the computer medium since the flexibility of its representations extends the freedom of play and manipulation open to the participant. Though further thought and investigations are certainly wanting on this matter, for now I will content with suggesting to approach the aesthetics and formal aspects of the medium in these terms. Though it is definitely not the only approach possible it might throw a new light on the potentialities of the interactive story.

### 4. Conclusions, perspectives, applications

In the previous sections I have employed the distinction between basic story categories and degrees of interactivity in order to understand the formal qualities of the interactive story and the engagement in this. I have reached the conclusion that the interactive story is to be found in the continuum between representational and interpretation stories depending on the type of interactivity made possible to the participant. Finally I have introduced play as a perspective on story dynamics and engagement in case of participatory interactivity.

The emphasis on the two story categories as well as their temporal features are definitely not very surprising moves and these arguments have probably occured in other relations before I brought them into this discussion. However, these are points worth repeating since it is often the confusion of these categories that causes the use of unexpedient concepts in relation to interactive stories - at least in my case. Moreover I consider the distinction between navigational and participatory interactivity very useful for further work. This is partly because this distinction in opposition to other definitions I have been acquainted with focuses on the actual experience of the participant rather than more technical matters. Furthermore the conception of these categories as existing within a continuum make them useful in relation to interactive stories displaying both qualities to varying degrees. Thus, I believe, the combination of more common theories of storytelling with the characteristics of interpretational stories might reveal a more true picture of for instance MUDs. Finally introducing as a possible perspective on interactive stories reveal some interesting perspectives to be explored further.

However, this work has been conducted during the course of three months only and there is still left a multitude of loose ends calling for a further investigation. Most basicly an extensive study within the disciplines of narrative psychology and social cognition would certainly improve my understanding concerning the interpretational aspects of the interactive story. Furthermore an actualization of some general concepts within the field of representational stories might reveal interesting perspectives. Here I particularly think of the difference between goals and endings and how this affects the interactive story. While the concept of play - at least in my view - constitute a useful perspective concerning the participant s engagement in the story world more extensive investigation into this matter is rather wanting. Particularly an empirical study of the type of identification caused by different points of views in computer games (14) seems crucial to me at this point. Thus I see at least three areas in which to increase my knowledge and conduct further investigations in order to acquire a more general perspective on the interactive story. Nevertheless, I also see several areas in which it is possible to employ some of my conclusions at their present stage.

As I already mentioned the distinction between categories of interactivity might serve as a useful framework when several disciplines are integrated in the analysis of computer games and stories. Thus, from an academic point of view the present work represents a possible option as interactive stories are approached. Furthermore my conclusions concerning the dynamics and participatory perspectives of the interactive story might serve as useful principles in the design of games and communication environments. I would like to emphasize that this is not only the case in the field of entertainment - knowing the fundamental role of stories in the way we make sense of the world these principles might as well improve the design and structures of educational environments, conferencing and interfaces in general.

Though these as well as various other suggestions and statements within this report definitely deserve further discussions and considerations I better end my ponderings here. However, I should gladly receive further views or objections concerning my reasoning in this report.

In this case my permanent email address is: annemette@image.dk.

#### 5. Notes

- 1) I have written a preliminary outline for a paper on this matter and plan to devote myself to a further investigation into this field during the coming months.
- 2) See among other a brief overview at http://www.dstory.com/dsf5/index2.html
- 3) This phenomenon can be studied further in the discipline of narrative psychology. Though I am not particularly familiar with this discipline Jerome Bruner represents a possible point of view. Acts of meaning (1992) seems to be the work most often referred to as well as The narrative construction of reality in Critical Inquiry 18 (1991) has a direct relevance in this context.
- 4) Actually, Brooks introduces Freud at this point. While the desire for the end and closure is held similar to the death drive the wish for prolongation and postponement is held similar to the life drive. Narrative desire thus exists in the interplay of the two. (Brooks 1984 chapter 4) In this relation however, I have seen no need to devote a further discussion to this concept since the essence remains the same: its the preexistence of the end that constitutes these dynamics.
- 5) The hypertext novel consist of several pieces of text connected through links in different manners. Thus, the reader chooses his way through the structure by activating

different links. I accordance to these principles the linearity of the text is dissolved in favour of what Bolter (1991) calls topographical writing, that is, a spatial organization of the story. Extensive works on this genre is to be found in: Bolter: Writing Space 1991 and Landow Hypertext 2.0 1992.

- 6) MUD s or multi user domains are network supported environment where users log in in order to solve quests or socialize. It is possible to distinguish between three types of stories in this domain first, the quest that is fairly structured and through which the user solve mysterious or obtain various goals. Second, the social aspects of the interaction that might hold certain story characteristics, particularly because of the tendency to take on new roles and identities as you enter the world. Finally, as you have acquired a certain position in this environment, you gain the right to create stories on your own, that is, to create quests for others to solve. (This description derives from an interesting conversation with Ashley Gadd and Joy Nicholson in august 1999)
- 7) At this point I fully agree with Brenda Laurels motto: representation is everything (in Computers as theatre 1993). While more technically oriented classifications of interactivity as for instance Jens F Jensen s (199x does, as far as I know, only exist in its original Danish version) might certainly serve specific ends I find it crucial to develop an understanding of interactivity centered on the actual experience of the participant.
- 8) A considerable number of academics have devoted themselves to the question of hypertext novels and the mental construction of meaning in this relation. The following titles represent a small number of these: Espen J. Aarseth Cybertext perspectives on ergodic literature, George Landow hypertext 2.0 and Jay David Bolter writing space
- 9) This conception of play derive from Bateson's Steps on an ecology of mind 1972, though I have become acquainted with this point of view through Sutton-Smith's The ambiguity of play 1997 chapters eight and ten. As a meta-activity play is action about action, that is, it recycles and reinterprets meanings and actions from other areas of life in its framework.
- 10) Berger and Luckmann (The social construction of reality 1966) represent an interesting point of view concerning the relation between social rules (institutions)

and identity, that also include some perspectives on the role in this relation. Thus roles can be said to be the product of rules (institutions) in societies with a higher level of division of labour. What I furthermore find interesting in this context is the relation between social roles and identity. Thus, in Berger and Luckmanns reasoning the individuals identity can be said to consist of a social and a personal part that might sometimes be seen as mergent and sometimes not. The individual s ability to step out of his own person and regard his social identity from the point of view of the strictly personal is of some importance in my reasoning concerning the attitudes present in the activity of play.

11) The adventure game can to some degree be held similar to the quest in the MUD. The player is supposed to solve an enigma, for instance a crime, by navigating around in the space, collect information and act in certain ways. It may be said that the adventure is more linear compared to the MUD. There is a certain path to follow and a certain way of solving the matter. A more extensive treatment of this genre is to be found in Aarseth: Cybertext 1997 chap. 5.

12) Another treatment of rules and attitudes towards rules in play can be found in Lenore Terrs Beyond love and work 1999 chap. 5. She as well emphasizes the importance of rules in play - deriving from every corner of our social life - but also the improvisation those rules are subject to in the act of playing.

13) An obvious example could be that of the election - this toptuned story at national level seems to gain its logics from the limited time within which it takes place.

14) Here I particularly think of the difference between first person view and third person view as well as second or third person address which obviously must result in different types of identification.

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