

AGNETA & FRIDA: A Narrative Experience of the Web?

Per Persson

Swedish Institute of Computer Science

Box 1263, S-164 28 KISTA

And

Department of Cinema Studies, Stockholm University

perp@sics.se

Abstract

Narratives encourage the reader to construct a coherent network of temporal, spatial and causal relations between events in the story. Browsing the web involves considerably less degree of coherence, and involves other forms of relationships, which may pose problems for some groups of users. In this paper we present a system, AGNETA & FRIDA, which tries to merge experiences of web and narratives into one mode, and thereby support some navigational activities. The rationales behind it are developed and the features of the system described.

Introduction: Experiencing Narratives

One of the basic presumptions within narrative theory in general, and discourse psychology in particular, is the notion of a reader/spectator constantly striving for *coherence* in his or her understanding and experience of a given text (e.g. Graesser, et al. 1994; Gernsbacher & Givón, 1995; Chatman, 1978:31; Bordwell, 1985:38). Coherence is sought for on many levels of discourse processing. On lower levels, word recognition, grammatical processing and local cohesion are central, and in visual discourse (like narrative films), object, event and situation recognition are equally important. Higher levels of coherence making includes inferring and constructing temporal, spatial, causal, associative, thematic and metaphoric relations between sentences, paragraphs, scenes or other textual units. It is important to point out that this network of relationship is not primarily textual phenomena, but a mental one. It builds up to an experience of holism - the feeling that the text 'keeps together' and forms a more or less tight structure in which things relate to each other (cf. Trabasso, Suh & Payton, 1995).

Coherence is, on this account, *accomplished* or *constructed* by the reader through a huge battery of tacit, and hence non-conscious, everyday assumptions or knowledge about the perceptual, physical and socio-cultural world, influenced of course by pragmatic parameters (e.g. the purpose of the reading). Sometimes, the text supplies the reader or spectator with concrete information, but most of the time the text presents nothing but cues, requiring a huge and well-structured system of background knowledge. These processes of 'gap-filling' and supplying the context in which a specific text segment becomes graspable, is still poorly understood (Graesser, 1994:374) but it seems to involve

biological, psychological as well as socio-cultural assumptions (Persson, forthcoming), making the separation between textual structures and reader/interpreter difficult to separate.

Of course, the degree of coherence is also a product of the textual strategies employed by the text. As an author or filmmaker, there may be aesthetic, emotional or narrative reasons to prevent the reader to create coherence. In detective stories, the causal relations between all the facts and events, are not to be disclosed and understood by the reader until the very end, in order to create suspense and possibly surprise (perhaps the narrative is leading the reader down 'wrong' paths of inference). In modernistic literature and filmmaking, obstruction of clear and disambiguous understandings and interpretations may provide a statement about the open and multi-faceted nature of the world, encouraging the reader not to accept received opinions.

The reason why readers construct similar models of coherence is because they share at least some tacit assumptions. Readers differ in their understanding and interpretation of a given narrative, due to the fact that such assumptions differ. The amount of relations a reader manages to establish in a given narrative should also affect the memory of that text. The greater coherence, the better memory.

Coherence refers to the ways in which readers or spectators understand and construct 'meanings' in a given narrative or a part of a narrative. Coherence is thus not specific for narratives, but is striven for in all types of discourses (descriptions, essays, documentaries, news, lists etc.). Narratives differ from most other forms of discourse, however, in its aim to evoke emotions and affect, acknowledged already by Aristotle. Narrative film and literature are indeed emotion 'roller-coasters', and this feature seems to be the reason why most people consume narratives and are willing to spend money on books, cinema and theater tickets. There is some form of *pleasure* involved in identifying with and feel sympathy-empathy for some characters, while loathing or be frightened by others. We enjoy detective stories and thrillers, since they play with our strive to understand the story, and thus generate surprise, suspense and curiosity. The very strong back and forth movement between hope and fear in horror genres seem to be one of its main functions. Comedy is 'good' if it makes the reader happy and laughing, while the prototypic tragedy makes us sad and low-spirited.

How emotions of this kind emerge in the act of reading or watching films is very poorly understood among literary and cinema scholars, as well as the traditional narratology, whose strong structuralist slant leaves questions of reception and psychology of the reader to its own destiny. As a preliminary start, however, one could assume that some coherence is required if emotions are to appear. Striving for coherence of narrative texts is thus probably not an end in itself, but points to a larger context in which emotions play a central role.

Experiencing the World Wide Web

People use and experience the world wide web with different purposes in mind. At its inception the information seeking metaphor was perhaps the most prevalent, but as computer technology has entered the field of entertainment and art, this metaphor is complemented with others. Now, many users surf the web, not aiming at supporting 'serious' work, but to get pleasurable, fun, social or aesthetic experiences in their own right (Murray, 1997). Web browsing fulfills many different purposes, ranging from serious information seeking to entertainment and distraction browsing. With more computers at workplaces, shifts from one to the other can be instantaneous and abrupt, or the two will occasionally blend into one. It is for this context AGNETA & FRIDA is constructed.

Many users appear to experience hypermedia in terms of spatiality. Everyday speech reflects this stance: 'we browse/surf the web'; 'we go to pages'; 'we enter/leave pages'; 'pages contain information'; 'the web is an information space in which we look for things' (cf. Maglio & Matlock, 1998). There also seems to be a correlation between cognitive spatial ability and how a user finds her way in hypermedia (Sjölinder, 1998). If this framework is correct then it is reasonable to assume that users employ navigational skills in the browsing, and that the system seeks support this navigation. A number of approaches within human-computer interaction design embrace this metaphor and exploit its possibilities and constraints (e.g. the PERSONA project, 1997).

One of the problems with hypermedia is that users tend to 'get lost'. The exact nature of this 'lostness' is not completely clear, and the reasons behind it may depend on a host of things:

- < I may not know if the desired destination or piece of information actually exist in the information space
- < I may not know exactly what I want or where I want to go, since my goal formulation is vague and needs support from the information space
- < I may not know where I am in comparison to the goal or some 'landmark'
- < I may not find my way back to the place I was before
- < I may know that the goal exists, but I do not know the route by which to access it
- < The information space may change between visits, thus disorienting the user

- < If the environment gives no feedback along the way ('you are on the right/wrong track') then some form of anxiety will arise

There is also reason to believe that some people are 'more lost' than others. These differences stem from individual differences (age, gender, cognitive abilities, personality traits etc.) of which some may be culturally influenced (Sjölinder, 1998).

One of the most central processes in navigating real and electronic spaces, is the concept of *landmarks*, since these are the entities which provides reference points for the relations between the users position and other places in space (Vinson, 1999). In real space, in virtual environments and to a certain degree in mainstream cinema (Persson, 1999), such relations are conceptualized in terms of 'to the left/right'; 'straight ahead'; '300 meters from the kiosk'; 'behind us' etc. On the web, which tends to be a more abstract form of space with no left-right relations between URLs, we may think about other forms of landmarks, for instance a bookmark, an advertisement, a specific link or an image, to which the user can return and re-find her way. By memorizing such landmarks and their relations to each other, the navigator may take short cuts in the environment and perform better on the next navigational session in the environment. If coming to a dead end, the navigator does not have start all over again but only go back a couple of steps to a landmark and then take another path. Landmarks also provide invaluable support when route descriptions are to be given to another user. The way in which a user succeeds in learning or memorizing a given hypertext environment depends on the amount of landmarks and the number of established relations between units. This mental network will be a powerful mental tool in upcoming navigating situations.

AGNETA & FRIDA Design Rationales

In a conceptually organized information space like the web, remembering landmarks and their relation is a very abstract activity. The relations established contains at best some spatial feature, but foremost they are conceptual/associational in nature. To establish coherence and meaningfulness in this kind of information organization, may present problems for those users with low ability on these parameters. With the AGNETA & FRIDA system we wanted to test the possibility of combining narrative and web browsing into a joint mode. Organizing the information space in terms of narratives, we argued, would perhaps encourage the user to establish other forms of connections between nodes. If we associated each information node with an event in an ongoing narrative, then we could take advantage of the rich network of spatial, temporal and causal relations ('the cogni-emotive glue') that lies at the core of understanding and experiencing narratives, and thereby supporting memorization and thereby navigation for groups that have problems with the abstract/conceptual mode. By introducing narratives into the organization of the information space, we hoped that the user would incorporate this into the memory of the

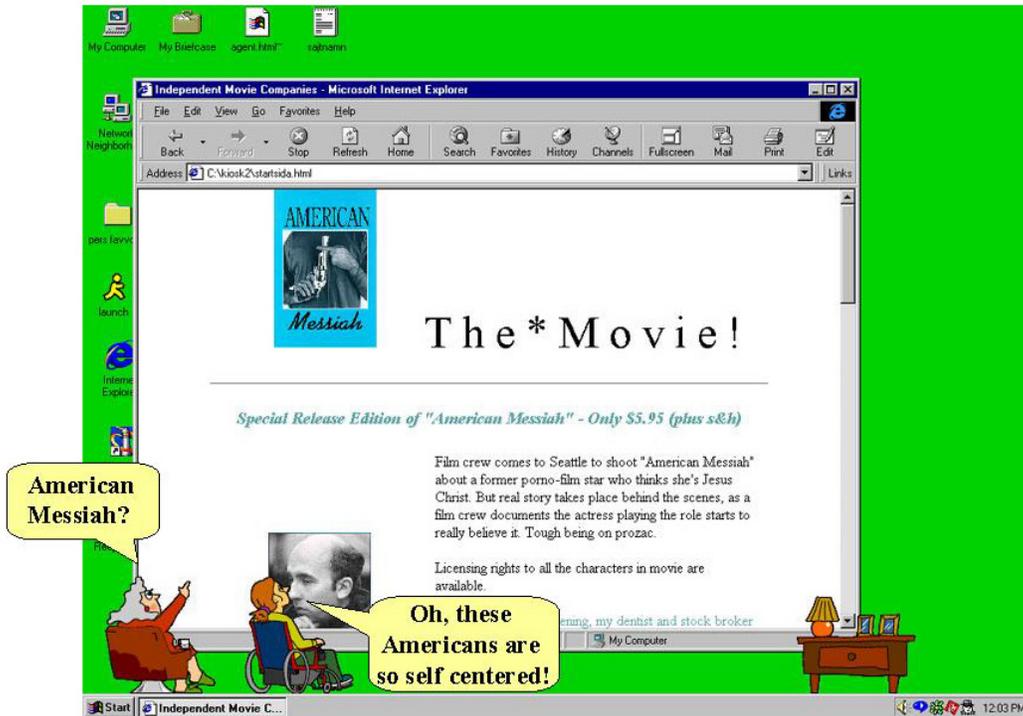


Illustration 1. Agneta & Frida reacting to the contents of the web site of a film production company.

browsing session, thereby establishing a more coherent experience than otherwise. Would the user experience it as an abstract hypertext browsing, or would she in fact experience it in terms of a narrative? And could the 'narrative' connections between the nodes, improve memory of the browsing session, and hence enable the user to find the way back to a certain node, by 'recounting' the story backwards?

MTV's Beavis and Butthead acted as our leading stars here. Just like this show interweaves music videos into a plot structure, we wanted to test if this was possible in web browsing. Are the contents and information in the videos/sites incorporated into the narrative by the spectator/user, even though they have no surface connection? Are the videos/sites remembered better because they are incorporated into a narrative and commented upon?

Another rationale behind this project was our discontent with the heavy cognitive focus of human-computer interaction and usability studies. Recent studies have aptly pointed out the tight connection between cognition and more affective dimensions (Picard, 1997). Being in, and navigating through, information space are of course influenced by 'rational' decisions and reasoning, but this side is more or less always accompanied with a general overall experience of the browsing, with distinct emotional and affective features. Frustration, anxiety, and 'flow' are just some examples of this. By designing the agents with a definite humorous twist, in many cases connected with the information displayed on the present

site, we wanted to 'support' affective experiences of web browsing and information seeking. We wanted to test whether emotive/humorous experience affected the memory of those sites, and if that supported some navigational activities (like finding your way back).

More specifically we tried to make the humor reflexive and related to the computer culture within which Agneta & Frida are placed, in order to reduce technology angst. New media always take themselves very seriously. Not until the representational and discursive practices of cinema and television were firmly established and known by a wide audience, these media started commenting on themselves (again, Beavis & Butthead's bantering the MTV aesthetics acted as a model here). You see very little of irony and reflexivity in publicly distributed software. Computers are still considered to be very serious and important things and agents are still extremely polite and have no time to comment or make fun of their own activities. Humor may fill, we assumed, the abyss of discrepancy between what the computer industry promises what computers can do, and the everyday problems encountered by the user.

Description of the Prototype

On the user's personal desktop are placed two animated females (mother and daughter), sitting in their living-room chairs, watching the browser (more or less like watching television). The motor or verbal behaviors of the characters are triggered by three sorts of cues.

First, behaviors are connected to the user's activity (onload, onclick, onmouseover) and document content (text, imagery, sound files, error messages, browser malfunctions etc.). Loading a page may trigger general everyday speculations from Agneta and Frida to what something on a site means, or what the purpose with the site is or if the design is likable or not [ill. 1]. Moving the mouse over an image may trigger a comment on the content of that image. These comments are often humorous and reflexive in nature, containing skepticism towards computer culture in general and its male dominance in particular. Agneta & Frida make remarks on the shortcomings of the system and acknowledge the frustration of a user encountering 'file-not-found' and 'waiting for loading' messages. The reflexive humor aims at trying to place the agents on the same side as the user, not the computer. This is also manifested in the fact that Agneta & Frida look at the browser with the user - not out towards her. By having two characters instead of just one, we made dialogue possible, and hence a more natural and dynamic way to introduce humor and self-reflection into the design.

The relevance - as well as the humor - of the commentaries, are in the prototype guaranteed by us, but in the future one could expect that commentaries, or parts of them, might be generated on the basis of some machine based analysis of the textual/imagery content of the site in question. None of the behaviors in this category are repetitive - once executed they will not come back.

Another set of behaviors/comments is of a more general nature, unrelated to content or user's activity. This includes blinking, picking noses, going to the toilet/kitchen, drinking coffee or general gossiping about uncle Harry and Miss Andersson (the owner of a repulsive poodle that often enters Agneta and Frida's back yard, and about which they occasionally fantasize killing). Some of these are repetitive (e.g. blinking, yawning), and they are triggered at certain intervals when there are no other behaviors running. These behaviors were included to create more lively characters, having a life of their own, independent of the happenings in the browsing session. We wanted to avoid the impression that the behaviors were only automatic reflexes of user's actions.

Thirdly, the user can choose to let small narratives run through the browsing session, interweaving with the two behavior types above. By clicking on the right mouse button the user is presented with a menu in which she can make the choice between different genres and titles. So far, the prototype provides one comedy ("Poodles: Cute Fluff or Ambassadors of Evil?") and one melodrama. Each of these plots involves circa ten scenes, which by certain time intervals are played out on the desktop, mingling with the more content related behaviors, thereby (hopefully) encouraging the spectator to make connections between the web sites, content related commentaries, and the narrative information.

The intensity of these three kinds of behavior can be regulated by the user, depending on the browsing purposes (serious information seeking, wayfinding, exploration or entertainment browsing etc.). Through a pop up menu, the user can set the level of activity (0-5)

which to different degrees disconnects some behaviors and defines the time interval between the remaining ones. The way to access this menu and the other features of the system are described or hinted at by Agneta or Frida when they are clicked upon.

Another feature is a search engine situated in their living room drawer on the right hand side of the screen. Here the user is able to search not only for words in the documents as a usual search engine, but also for words in the Agneta and Frida comments history. If the search is successful the user will be presented with the joke or comment in which the word occurred, as well as the actual URL. The reasoning behind this idea is that jokes and comments about the information may in fact be better remembered than the information as such. If the user wants to find her way back to a particular site, the search engine supports those users that have a clear memory of the joke presented at that particular site. This again comes back to our focus on experience. The Agneta & Frida comments may be seen as 'affective annotations' of the information nodes, encouraging the user to pay attention to the experiential side of being in information space. This can, through the search engine, be used to support some situations of navigation.

We have implemented these ideas in the prototype via JavaScript and Microsoft Agent Tool. The prototype is right now undergoing evaluation and usability tests (for preliminary results see Höök et al., 1999).

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