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GIRLSROM: A ROM OF ONE'S OWN

The construction of femaleness
in multimedia

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1. The gendered distribution of computer enthusiasm

The lack of computer literacy among certain groups, especially females, has in the recent years become a major public concern in Norway. The multimedia turn, with the introduction of the Internet, CD-ROM's, and e-mail, has risen the expectations for the individual and societal benefits to be gained from the computer-technology. Computer literacy is perceived as an obligatory condition for partaking in new arrangements of welfare and democratic influence as well as for future success in the labour market. In Norway, the penetration of computers in the home (and at the work place) is generally very high compared to other European countries. In 1996 half of the households had a PC. The number of household on-line connections increased from 100 000 to 300 000 thousands within a year, from September 1996 to September 1997.¹ This massification does not, however, inevitably lead to a more equal distribution of computer competencies and enthusiasm across gender and age. Computer-use statistics show that the majority of users still consists of males under 40 - 45.

Official strategies to promote literacy are focusing primarily on issues of access and training.² However, from recent studies we know that computer competencies and enthusiasm are deeply embedded in complex cultural conditionings. The works of Aune (1994) and Berg (1996) have highlighted how the domestication of the computer within the households follows clearly gendered patterns. Almost without exceptions are the computer integrated as a masculine artefact - males are the keepers of the knowledge of the machine, they control the practical use of it, and through its placing and signification, it is symbolically given meaning as their "toy". Gansmo (1998) has recently made the interesting observation that this frequently happens even if females display an initial interest in computers. Moreover, a study of girls in fact devoted to computers (Nordli 1998a) showed that the features of their enthusiasm were quite different from earlier descriptions of male-devotees.³ Contrary to the assumption that computer interested girls are "tomboys", more masculine than most other girls, these girls appeared to quite ordinary girls. Furthermore, the girls collaborated to develop a computer identity that was rooted in their ordinary life interests (but expanded them).

This points to the importance of cultural identification as a precondition for developing computer literacy. In the case of Nordli's girls, they developed

¹ Figures from Brosveet/ Sørensen 1997

² Den norske IT-veien - Bit for Bit. ODIN, Samferdselsdepartementet (SD). 1995. [Http://odin.dep.no/it/it-veien/kap2-4.html](http://odin.dep.no/it/it-veien/kap2-4.html).

³ The standard reference in the literature on hackers is Sherry Turkle's "The Second Self" (1984). In Scandinavia studies of hackers have been conducted by Håpnes (1996) and Nissen (1996).

their competencies and enthusiasm collaborating on their own, even if their schools could be said to act as "intermediaries" by encouraging the use of the schools computer facilities. However, these girls also reported on spots where their enthusiasm failed; e.g. they experienced a mismatch between the games offered and the games they would like to play. This makes us sensitive to questions concerning the emergence of a common cultural ground for relating to the computer. Previous non-expert users need reasons to go along, as well as models to act upon and practices made relevant. Furthermore, in these processes we can expect that both the technology and the culture are changed in significant ways; what is currently termed "the mutual shaping process" (Lie and Sørensen 1996, Berg 1996). In the case of the engagement of female users, we will thus look at how the technology is translated (or not translated) into a feminine artefact, but also how the appropriation of the technology may give rise to changed femininities.

I will take as a point of departure one special attempt to encourage female users to develop computer skills. In the June 1997 edition of the young women magazine *Det Nye*⁴, a CD-ROM called GirlsROM ("JenteROM") was included. GirlsROM is a CD-ROM marketed to females between the ages of 15 and 30 years, with the manifest aim of attracting them to multimedia. The CD-ROM was developed by a small (one woman and a network) multimedia firm named Blekkhuset A/S. *Det Nye*, the magazine, is owned by the biggest magazine publisher in Norway, Hjemmet-Mortensen.

My study will focus on what conceptions of the relationship between technology and gender that were invoked in the project, and how these conceptions were developed and modified. The project is interesting because it represents an ambitious attempt to design new forms of multimedia content and invent and engage new groups of end-users, thus it can be considered as an experiment in social inclusion. The story of GirlsROM is a success-story, in so far as the initiator managed to exploit established media-channels to distribute GirlsROM in an amount of 100 000 copies. But my study will also uncover how this project gave rise to rivalry and competition among culture industrial actors over the right and power to define and the definitions of females and multimedia.

At the micro-level - in the one-to-one relation between artefact and user - it is furthermore interesting to address the question of whether GirlsROM does work. Does it help to create computer enthusiasm? I am also concerned with the macro-implications of this and related, market oriented or cultural industrial attempts to configure the relationship between gender and technology. In the

⁴ Translated: "The New".

light of these investments, what can be inferred about the salient characteristics of the emerging field of females and multimedia?

2. Taking action in the economy of learning

Multimedia experimentation and regulation are not conducted in an once-and-for-good-manner, but take place within the reciprocities of time, thus they give room for processes of *social learning*. Social learning is the key term within the SLIM-project, of which this study is a part (see Sørensen 1997). As I understand the concept, it marks a turn in perspective from the traditional social shaping-approaches. It implies that focus is moved from the socio-technical constructions themselves, to the learning involved in the realisation of them. Thus, emphasises is put on how the actors monitor their own and each others actions within the limiting contexts of time and space.

The supplementary concept of a *learning economy* makes it clear that social learning is not to be understood as a psychological process or something released from conflict, but as an appreciation that takes place within networks and structures of interests. This concept makes us sensitive to the variety of actors and motives involved in the development of multimedia applications, and how these relate to each other. It tries to capture how actions emerge in areas of uncertainties and risks. In traditional market theory, relationships between producers and users are thought mediated singularly through the impersonal mechanisms of the market. However, there is good reasons to believe that other, non-marked mediated trajectories and indirect couplings play a much larger role than these theories makes it possible to account for. This may especially be true in a new, emerging field such as multimedia content production. The social learning-approach focuses on how learning lessons are circulated among producers and users, and tries to illuminate how a learning economy works in a much more contingent and dispersed way than the market feedback model suggests. Furthermore, it explores how the lessons are modified and integrated into local practices and ways of understanding through domestication-processes at each spot.

In this paper, focus is on the lessons and the role of "intermediaries" (or "intermediate users") in the cultural industries in the possible feminisation of multimedia in Norway. Within the SLIM-framework, the key role of intermediaries in shaping the various local and segmental multimedia-grounds, are stressed (see Stewart 1998 and Williams 1998 for an elaboration of the term). Content producers form an especially important and interesting group of intermediaries (Preston 1997). The acts of intermediaries are significant for cultural change in several respects. Østby (1993) has pointed out that intermediaries serve as *intermediators* - they mediate between technology and

culture, between supplier and end-user. When doing this, they are *interpreters* of the technology, and their success (or failure) in doing this, are crucial for the reembedment of the technology in the various local and segmental settings. Intermediaries typically act as *initiators*. They initiate social experiments designated to explore the possibilities of the technology and its cultural appropriation. Finally, they take on the role as *regulators*. Regulation is so to speak the opposite side of the coin of initiation, as important outcomes of a successful experiment is that some interpretations of the technology become more dominant. Simultaneously, positions between actors are delegated.

In an elaboration of these last points, Lieshout, Egyedi and Bijker (1998) have recently suggested that social learning operates within two modes or logic's, with distinguishable objectives and loci of action. In the *experimental mode*, actions are geared at promoting new uses and safe-guarding innovativeness and openness. There is an attention for aspects such as equity and pluriformity. In the *regulative mode*, attention is shifting towards evaluation, command and control. Regulation does not necessarily follow experimentation. Regulatory efforts can take place simultaneously with experimentation's, be pursued by some of the actors in an experimental environment, and also give rise to experiments. Thus, the two modes should be considered as reciprocal modes.⁵

The designation of processes of experimentation and regulation can also be understood as an elaboration of the analysis of opening- and closing process familiar from the social shaping-literature. But again, highlight is on the crucial importance of time, e.g. for the knowledge available and the ability to act adequately. Importantly also, regulative efforts is not seen as confined to governmental bodies or other particular actors, but can be part of the actions of any producer or user of multimedia.

In the analysis, I will highlight the reciprocity of the experimental and regulatory aspects of the GirlsROM-production. GirlsROM will be considered as an experiment in two senses. Firstly, it is an experiment in content. What could be made to attract young women to multimedia? Alongside - or intertwined - with this, is the question of how such a product could be realised. How could it be pressed, financed, distributed? How was it negotiated? Then GirlsROM will also be considered as an instance of regulation. The end-product embodies a political statement about the relationship between girls and multimedia. What kind of statement is this? The production gave rise to a battle over positions between actors in the cultural industries. What are the

⁵ We should perhaps add a third mode, the mode of ignorance. When approaching the multimedia field, we witness time after time that even the seemingly most obvious lessons are not taking into account, that people dispell disinterest, and that people are spending a lot of money on repeating other's failures.

implications of this turmoil? By looking at the attempts to "freeze" particular interpretations of technology and gender, and the delegation of positions, I hope to be able to give some answers to this.

To capture the reflexive monitoring performed by the actors involved in my story, I will introduce the concept of "*action concepts*". This is an empirically grounded construction, but I will argue that it fits well with the rest of the outlined analytical framework. It struck me, as I were trying to make sense of my material, that the history of GirlsROM embodied a limited number of reoccurring, partly spelt out, partly hidden assumptions or understandings. These seemed to be able to account for very much of the action that had taken place. I have chosen to call these "action concepts". Even if these concepts themselves evolved and changed in the course, they nevertheless continued to be the locus that the activity returned to and departed from again.

Thus, I understand the "action concepts" as *processual concepts*, meaning that they are *creative constructions, developed for the purpose of the on-going project*. They don't form part of the backdrop, neither as ideological imprints, nor as habitual dispositions. Rather, they are active responses to it. Therefore, I will expect them to incorporate interpretations of technology and culture as well as draw on bodily/ organisational experience. As a third constituent, I will argue that the action concepts are born out of a linguistic necessity inherent in the project itself: the internal necessity to pose standards against which the project can be shaped and evaluated and the external necessity to be able to express and communicate what it is about. Thus, as I will show, the action concepts both serve as motivating forces and as argumentative tools.

My formulation bears some resemblance with Acrich's (1992) "scripts" and Latour's (1992) "programs". But while these latter are more geared at capturing properties embodied in (finished) socio-technical constructions, action concepts are designated to capture the processes leading to the constructions. Thus, they are more flexible, adjustable, amenable for negotiation and change in valour (if not overthrown and replaced all together).

3. GirlsROM: The material apperance

I found GirlsROM and the June-edition of Det Nye at my desk together with the suggestion: "Maybe I could do a paper on this one". The record had a silver coating, with the text in black on it. At the top was the name of the company, Blekkhuset A/S, followed by the logo of the CD-ROM, GirlsROM, symbolised by a key. A reference to a www-adress was printed under the logo. The base of the disk label was covered with the logos of fifteen other companies, obviously the sponsors of the project. There was no further clues to what the CD-ROM

contained. I looked up in the magazine for a presentation, but could not find any.

Starting to investigate GirlsROM, I first went on to enquire the www-adress.⁶ There I learned that GirlsROM is a “*knowledge-CD*” that contains a diary application and a calendar, together with information about trends, sport, body, health, music, environment, food and IT. I also learned that GirlsROM is planned as an annual event. A link to a report on the CD-ROM in Datamagasinet, an on-line computer magazine, gave me insight into some of the rationale behind the product.⁷ “It had for a long time irritated me that girls don’t use data”, says the creator of GirlsROM, Siv J. Henningstad, “and I wanted to find ways to attract them to the PC”. This was to be accomplished by proving that the PC is a useful tool also to women.

How had these ideas been materialised on the CD-ROM? When I installed the CD-ROM, I tried to get a first impression of the ways in which GirlsROM be said to be “useful for girls”, and I identified three. First, there is the diary-part that takes up most of the entry-page. Here we are invited to come with our confessions electronically. Privacy is to be secured by a password-locker (cf. the key in the logo). Second, from the entry page one can link to the themes mentioned above. The themes, that were chosen on the basis of a survey of girls interests, are presented in words and pictures, and occasionally accompanied by sound and video-strips. Part of the content here had been written by invited “special-writers”, i.e. people with a nation-wide reputation in their fields. Third, the CD tries to be useful by providing information about as well as giving access to the Internet. Access can be accomplished directly from the entry page, and the Norwegian telecom, Telenor, offers the user one month free Internet access if they link up.

My initial impression, then, was that GirlsROM is trying to *establish a usefulness by being interesting/ “knowledgeable”, easy to handle, and allowing for intimacy*. Two questions naturally stood in front of the further exploration: Why was GirlsROM given this design? And why did the first CD-ROM for girls originate, where it did originate? Even if these questions seem to demand different levels of explanation, my story will show that the answers are strongly interconnected.

The study is based on a semi-ethnographic approach, combining in-depth interviews with workplace visits. By this I learned not only about the opinions of the main participants, but also about the physical locations where the work and the dealings were being performed. I relied on the method of “snowball”-

⁶ <http://www.sn.no/blekkhuset/frmain.htm>.

⁷ Britt Wang Løvik: “Nedlåste betroelser”, <http://www.idg.no/datamagasinet/0297/jenterom.htm>.

sampling, and my inquiries took me from the quiet open landscapes of suburban Oslo to the hidden industrial valleys in the depths of mountainous Norway.

The main informants are the editor of GirlsROM, the director of EURO-CD, the editor-in-chief of Det Nye, and the net editor at Hjemmet-Mortensen. I wanted to conduct an in-depth interview with the former market director of Det Nye, but had to abandon my plans after repeated attempts. Even so, he has commented on his involvement with GirlsROM in a telephone conversation. I have also conducted telephone interviews with some of the sponsors of the project. Furthermore, I have used the methodological option to perform inquiries through the Internet, gaining valuable information and electronic paths to follow. This has also made me more aware of the salient features of GirlsROM (and its "descendant" HomeNet, that I will return to in section 6).

4. Playing with femininity and technology

Siw J. Henningstad tells a "myth of origin" about how the idea of GirlsROM was captured. It was short before Christmas. She was out to buy a gift for her ten years old son. In the Henningstad-family there has always been much data, with her husband working as a programmer, and she managing her own IT firm. Since early childhood the son is accustomed to look upon the PC as a tool to be used, not as an exterior artefact. So Siw had decided to buy him some data programmes he was likely to find enjoyable. In the data-shop, looking through the shelves of offerings, being a mother, sorting out quality from garbage, she made a realisation. Suddenly it occurred to her: There's nothing for me in here! All these offerings belongs to a boy's or a man's world!

This "myth" obviously has some good ingredients, including the good intentions, the density of the narrative, the escalated estrangement, and the sudden discovery. For sake of perspective I will date the event to one day in December 1995. Then we have the starting point of what one and a half year later reached Det Nye's readers as GirlsROM. The next question is: Where do you go from a bright glimpse to a realised product?

Now, Henningstad had some advantages at the outset. Since the beginnings of the 1990s she had ran her own company, Blekkhuset A/S. As the name indicates⁸, the company started out in the printing business, but had diverted into multimedia in 1994 by producing a photo-CD. Her formal education was in marketing. She had no formal background in data processing, but had gained experience from former work, from her husband, and through instruction manuals and trial-and-error.

Still, when she went on to develop the glimpse from the data-store, she started by drawing on her competencies as a woman: *"And I thought, what on*

⁸ Translated: "House of ink".

earth shall I make for women, what do women like? And so I thought, I better start with myself". The plans for *the diary-part* came directly out of this reflexive monitoring. The diary part represents a transfer of a well-known and familiar form into the new media, and in that way allows for recognition. At the same time, the CD-ROM became linked to an activity which is widely regarded as being typical female. Technologically, the building of the diary was accomplished by the choice of a multimedia tool called Frontpage. The exploration of the tool resulted in the diary part being extended to include other functions, such as a calendar and a time manager. Later, Henningstad also detected that it was feasible to introduce a password locking-system that would ensure against unwanted readings of the diary-notes. This of course strengthened the metaphorical associations to *a girl's room*.

Earlier I wrote about the "action concepts" that I induced from the empirical material. The diary-part constitute the most revealing expression of the first of these, the action concept of "*quietness*". We note how notions of privacy, intimacy and quietness connected to diary-keeping oppose the stereotypes of the noisiness of male computer use. But the ideas of quietness also permeate the production at a more general level. Henningstad believes that CD-ROMs are perfect for offering "*a quiet experience*": "*... you are in a medium that is experienced as quiet and you sit quiet and relaxed before your computer, enjoying yourself and trying to find things*". Here we can see that quietness not only opposes male stereotypes, but also the sensation-seeking and here-today-gone-tomorrow mentality of tabloid journalism.

The plans for *the thematic part* also came out of the self-monitoring. Henningstad wanted GirlsROM to be a place where one could learn things. This part also embodies a clear reference to a recognisable cultural form, namely that of the thematic feature in the weekly paper. Still, here the intention was to use the electronic media to transcend the format: "*To put together themes... So it's an advanced form for weekly, but in a complete different fashion, where you also have sound and much greater stocks of knowledge on the different themes*". In Henningstad's opinion, a CD-ROM would also be a more "quiet" and contemplative medium than the transient papers.

When she was to decide on which topics to be treated, she did not rely solely on her own intuition. She used her contacts from the marketing school to carry out a market poll. Together with a class of students she designated a questionnaire, and they conducted interviews with a sample of hundred girls in secondary school and college. Obviously, the results of the survey were used only as guidelines (and of course relied upon in order to convince sponsors and writers about the seriousness of the project). Even so, the fact that the poll was conducted proves an inherent willingness to learn, technologically as well as socially.

As mentioned above, Henningstad hired public figures as "special writers" to create part of the content on the different topics. In this instance, the collaboration with Det Nye proved of great value. Also, her plans were that users would be given the opportunity to access writers through e-mail, but, except for world champion marathoner, Ingrid Kristiansen, the writers all hesitated. Technologically, the thematic part comprised few surprises, as it consisted of basic multimedia editing.

The decision to organise the CD-ROM according to themes can be traced back to the action concept of "*knowledge*". As explained earlier, the product was marketed as a "knowledge CD". "Knowledge" should be viewed as an answer to the assumption that females want to use multimedia for utility purposes.⁹ Again, this is also formulated in opposition to stereotypes of male computer use. Male computer users are believed to more often be in it out of technical fascination and have a propensity for sheer play. Reflecting on what a "BoysROM" would have looked like, Henningstad suggests the difference: "*Men would have had 80 percent play and, maybe, 20 percent knowledge*". However, the concept does not only pertain to knowledge *on* multimedia, but also to knowledge *in* multimedia.

The third part of GirlsROM, the provision of information about and direct access to Internet, entered in to the project at a later stage. This part seems to have relied on the discovery of its technological feasibility. However, it tied in quite neatly with the ambition for the CD. The purpose of GirlsROM could now be given a *double hermeneutic*. The answer to the problem of making women attracted to multimedia, was now not only by having them to use GirlsROM, but by having them to use GirlsROM to use multimedia in general.

Here we can identify the third of the action concepts that promoted the microstructuring of the project, the concept of "*easiness*". It should be easy to use the CD-ROM, and it should be easy to enter the Net. We note how also this concept opposes images of the male computer use: the images of the closed brotherhood connected through secret devices and cryptic code languages.

So, to the question of why GirlsROM was given this design, I can now give some answers. I think a significant aspect of the production, - and here there's no reason to doubt the "myth of origin" -, is that it was extremely open-ended from the start. There was no obvious restrictions to what this CD-ROM for girls should or could entail. This aspect sets off GirlsROM from most other

⁹ It has for some years been kind of a "public truth" in Norway that females will not start to use computers before they see the utility in it. However, what "utility" more exactly should amount to, is more rarely discussed (see Nordli 1998b. See also Sherry Turkle's article "Why women fear the intimate machine" (1988) that gives a rationale for this view).

multimedia productions, where intentions are defined much narrower and limitations imposed from the beginning.

Also, the very explicit thematisation of gender is a distinguishing feature. Whereas the eventually gendered aspects of multimedia productions usually are part of an unthematized background, of assumptions that must be deciphered and traced back analytically in the aftermath, here they form the locus of the production. In many respects it is true that GirlsROM is a pioneering work. Of course, comparable tasks had been completed by and for women in this field earlier, "even in 1996". For example did the design of women net-sites, internationally and in Norwegian academic circles, serve as a source of inspiration. On the homepages of GirlsROM, one will find links to some of these applications.¹⁰ Still, Henningstad had no obvious models - or countermodels - to draw on.

Modern sociology of technology has focused on how the production of artefacts can be viewed as the closing of controversies (Latour 1987). In the case of GirlsROM the (open-ended) experiment of how to make something for women ended up with a product that consisted of the three parts just described. My story so far shows that the three parts followed different paths of development. Most interestingly, it should be noted that notions of femininity and of technology entered at different stages in each case. The diary-part was i.e. born out of self-monitoring, Henningstad exploiting her competencies as a woman, and it steered the choice of multimedia-tool (but the discovery of new technological possibilities did later transcend the original framework). Conversely, the Internet part was triggered by the discovery of a technological possibility, which was then used to strengthen the general, idealistic purposes of the project (attracting women to multimedia). The closing process, then, did not consist of a simple derivation of images of femininity, no more than it consisted of a simple application of technology. Rather, I find it is as an illustrating example of a mutual shaping process, in which elements of both technology and femininity were explored, exploited and altered (cf. Lie and Sørensen 1996).

I find that the action concepts of "knowledge", "quietness" and "easiness" played an important role in the mediation between technological devices and cultural images. They formed a base where more concrete actions could be taken, and also served as an evaluative stand for the project. In terms of closing, the concepts clearly brought GirlsROM forward, from an open-ended ambition into workable schemes. In the next section, I will show how they not only helped defining the relevant content, but also the relevant networks.

¹⁰ See <http://www..sn.no/blekkhuset/frlinker.htm>.

5. The politics of GirlsROM

So far the question of closing has been treated with no more than short glimpses to the wider networks that had to be involved in the production. As to the question about why GirlsROM did originate where it did, it is clear that the "myth of origin" is sociologically unsatisfactory, even if the "myth" highlights one very real circumstance: the absence of multimedia products designed for women. Still, we know little of why and how the incentive from Blekkhuset A/S succeeded. What I will do now is to show more concretely how the backdrop - in form of the structuring of culture industrial actors and their varying openness or "readiness" towards electronic media - entered into the development of GirlsROM.

I will start with a closer look at the relationship with Det Nye, the magazine that distributed GirlsROM. It was crucial for Blekkhuset A/S to find a way to distribute the CD-ROM. Ordinary marketing was never looked upon as any option, due to a number of budgetary and other reasons. The idea to contact Det Nye was captured quite early. Obviously, the product had to be distributed with a magazine that was read mostly by women. Henningstad assumed that the typical family magazines would not be ready for such an undertaking. When considering the magazines for younger women, she thought that Det Nye would be a good place to start.

Among the staff at Det Nye, she came to deal with their marketing director, a man named Jarle Roll Ludwigsen. He was very intent on promoting the magazine as being in front of the trends, and he immediately got hooked on the proposal from Henningstad. Bundling of CDs had earlier been done by music and computer magazines, but never by fashion or women's magazines. Already, Det Nye had made another multimedia investment. With a release of an Internet service in the spring of 1996, Det Nye was among the first magazines on the Net, but the running of the service actually went into a bit of a standstill after the hired establishers withdrew.

So, Det Nye, or at least their marketing director, was in lack of a strategy and open for insertions. Learning about the concept behind GirlsROM, Ludwigsen became very enthusiastic, stating it was *"the right investment and the right time and the right product"*. The evolving schemes for a product based on the concepts of knowledge and intimacy could easily be retranslated and made to match with the interests of Det Nye. In his calculations, the planned CD would pay very well off for Det Nye, in form of publicity, visibility and profiling.

A contractual agreement was signed between Blekkhuset A/S and Det Nye, and Henningstad and Ludwigsen developed a close collaboration. Obviously, issues concerning the production and the distribution of the CD-

ROM had to be co-ordinated. Ludwigsen also spelled out expectations Det Nye had to the design of the content. But their meetings also served as a think-tank where ideas could be aired and plans worked out.

When assessing the significance of the relationship with Det Nye in the realisation of GirlsROM, it is important to trace the variety of ways in which the product was influenced. The most important contribution was of course the decision of Det Nye to distribute the product. They also contributed a smaller amount of money. Regarding content, they were responsible for the fashion-stuff. But moreover, the collaboration had some far-reaching indirect outcomes.

Let us reconsider the openedness of the project from the outset. With the Det Nye contract, the intention to make a CD-ROM for women was redefined to making a CD-ROM for the readers of Det Nye. First and foremost, this meant a narrowing of the age group. The product now would be aimed at young women between the ages of 15 and 30. In turn, this gave a certain direction to the angling and design of the contents. This directedness is visible in all parts of the CD-ROM. For instance, it had an impact on the pedagogy of the Internet-information, the layout of the diary, and the choice of special writers.

Another important aspect is that the collaboration with Det Nye served as a gateway for the further recruitment of sponsors and contributors. Undoubtedly, the fact that GirlsROM became associated with Det Nye helped in persuading special writers to take part. Also, it could be used to convince possible sponsors, and it gave the project a lot of publicity.¹¹ Even so, as we will see later, this close association was also to become troublesome.

It soon became apparent that in order to persuade companies to enter as sponsors, Henningstad had to make major efforts. Financially, a rough estimate of the overall expenses, excluding salary for Henningstad, amounted to NOK 1 000 000. From very early on the plan was that the project should be financed in part through advertising. Still, she also hoped for grants from Statens Nærings- og Distriktsutviklingsfond (SND), a Norwegian government body supporting new incentives in the private sector, but they proved unwilling, stating that women and data was not among the designated areas of support. After several applications to SND had been turned down, the recruitment of sponsors became vital for the realisation of the project.

How was Henningstad able to attract sponsors in support of GirlsROM? Well, she did some research to find out which companies usually targeted their advertisement at young women. These companies were contacted by letter and by phone. She maintained *the seriousness and sensibility of the project*. She

¹¹ A list of writings about GirlsROM can be found at <http://www.sn.no/blekkuhuset/fr.....htm>

tried to make them realise that this was a pioneering project directed at a group looking at multimedia with increasing curiosity and interest. Would-be sponsors should make use of this opportunity. In the marketing, she stressed the term “knowledge-CD”, so as to make it clear that it was no games project. She conveyed the impression of seriousness, referring to her established company (Blekkhuset A/S), the results of the undertaken survey and the distribution agreement with Det Nye.

Interestingly, she was also able to argue *the benefits of the medium*: “*Luckily, I was able to convince them that being represented on a CD-ROM has as high a value as being in a paper. Maybe more value, because you are in a medium that is experienced as quiet and you sit quietly and relaxed before your computer, enjoying yourself and trying to find things ... So it's not like a commercial channel, and if the advertisements then are quiet and discreet, then it really has a higher value*”.

It should be noted here how the “action concepts” not only served as a mean to develop the contents, but also to build the networks. This also pertains to *the provision of easy access*. We have already seen how Henningstad was able to recruit Telenor on the basis of this argument. This fact is not difficult to understand, as it is highly compatible with the strategies of Telenor in the multimedia-market. As we have seen in the case of Telenor (and Det Nye), the “action concepts” proved to be able to persuade other sponsors to translate the project in accordance with their interests.

Of course, not all companies contacted were persuaded to take part. *The problem of counting* was the counter-argument most often put forward by abstainers. As one market director expressed: “*We have no possibility to check. Even if they have a distribution of 100 000 CD's, we don't know how many of them are actually used*”. Some branches were more hesitant than others about joining. According to Henningstad, the scepticism was most outspoken among the automobile trade and in the travel branch. I also know that some of the invited parties declined for non-commercial reasons, finding the project to lightweighty.

The enrolled companies had a variety of reasons for participating, depending on their overall marketing strategies and their former actions towards multimedia in special. Two companies, LaMote and Twinning's Tea, had no previous experience in multimedia whatsoever. They looked upon advertising in GirlsROM as a way to learn, to gain knowledge of the new media. As big firms, they were not ready to launch their own Internet services. The marketing director of LaMote explained: “*Before we go out, we need someone with the competence to take care of the service, so that something happens there*”. In her opinion, such an service also had to be directly connected to sales, else it would

not be worth pursuing. Their participation in GirlsROM thus served as an intermediate step, a chance to make themselves visible in the meantime.

Their counterpart is Libresse, the tampon producer. Libresse had since long been running an Internet service.¹² Their homepages are filled with a variety of offerings. There are pregnancy and health tests, information about topics such as prevention, puberty and menstruation, an on-line nurse-service and an open chat-line. In this respect, Libresse is exploiting most distinctive characteristics of multimedia fully. At first glance it appears that they do anything but advertise or sell their products. This should be linked to their overall actions as advertisers. Libresse employs what should be termed a "total" marketing strategy. They want to be visible to women and reach out to women through all the medias there are. Thus, participating in GirlsROM only become a small part of their marketing efforts.

Also when it comes to the contents actually presented, the contributions vary greatly, from simple presentations to more advanced retrievals. LaMote was among the former and Libresse among the latter. Noteworthy is the contribution from the *Government Health Surveillance Board* (Statens Helsetilsyn). They has put in a database and a seek-engine on health matters. Again according to Henningstad's opinion, the advertisements from the non-commercial organisations worked best, because they were the more "quiet". The advertisements are placed in the various thematic parts of the CD-ROM that they can be associated with, thus in a way filling these out. Still, in terms of significance, the most important contribution of the advertisers were the funds provided for the production of the CD-ROM.

The pressing of GirlsROM was done by a company named EURO-CD. Situated at Rjukan, a small town in the mountainous area of Southern Norway, EURO-CD is Norway's only factory for full production of CD-records. It is otherwise common that productions are done abroad. However, the company was able to give Blekkhuset A/S a good offer. For EURO-CD the pressing of the CD-ROM was a run-of-the-mill job, meaning that their involvement would be much the same as with any other production (though this was a relatively huge one). Still, the director of EURO-CD, Sindre Haugen, expressed great satisfaction of working with the project, due to what he regarded as its special qualities. In 1997, EURO-CD estimate to do about 1 500 CD-ROM productions (including music-CD's their production would reach 3 000). According to Haugen, the special qualities of GirlsROM were for one thing its directedness at women. Next that the concept and the project was so much worked on as it was.

How we choose to appreciate a product like GirlsROM depends on which standards we put it up against. But one important feature of the field of

¹² See <http://www2.libresse.no/libresse>

multimedia content provision is exactly its state of flux, implying that standards are few and rudimentary. In this respect, Haugen's views as a witness deserves some attention: "*Today we experience great differences in knowledge and accurateness of those who deliver us material. And this is because, like I've told you, the deployment of CD-ROMs is only in the runway. It's partly up to the imagination of the ones who wish to employ the technology ... We have seen many instances of wretched productions*". What marked out the development of GirlsROM was the creativity and the firmness by which problems were sought overcome, again according to Haugen's views.

This is also evident with respect to the *beta-testing* of the product, which sociologically is the most interesting part of EURO-CD's dealings with GirlsROM. In short, a beta-test can be described as a test of a demo-version of a CD-ROM, that, depending on the set up of the test panel, gives intermediate users and end-users a chance to influence the technological process. EURO-CD offers such tests, but Haugen could tell that many customers dropped this testing altogether to save costs. For GirlsROM, Haugen and Henningstad set up a test panel consisting of one hundred persons.

The test panel was composed of people in one way or another involved in the project (Det Nye, sponsors etc.), technical experts (programmers at Rjukan Data) and end-users (Henningstad's "enthusiastic girlfriends"). Haugen: "*Siw (Henningstad) constructed groups of users in different categories, that tested the program and provided feed-back on things they found obscure, things they found stupid, responses to the design etc.*" Even if this selection might seem haphazard to us, the procedure followed was very thorough, following the standards for a production quality test. It was not possible to trace exactly what this finishing touch did with the product, except that it caused a simplification of the start-up procedure. Also, Det Nye, at the time of the beta-testing (spring 1997), had some strong objections to parts of the contents, and demanded among other things a series of pictures removed. This story, however, belongs to the next section.

My story, having followed the process from the idea was captured through the beta-testing, shows that *the closing of GirlsROM* was heterogeneous in nature. GirlsROM should not only be viewed as an experiment in content, but also as a technical, commercial and social experiment. It was the outcome of the dealings with a lot of people, instances and events. In my case, I think that the backdrop - the structuring of the multimedia field - should be understood primarily as conditions that *were taken advantage of* during the development of the product. Still, in this last section I have also pointed at the instances where the backdrop more concretely have entered into the product and *formed* it. In the light of the task Henningstad was concerned with and the terrain where it was performed, I are willing to say that a distinguishing trait of

the production is that of thorough planning.. This does not mean that it is impossible to feel the presence of other factors: time constraints, compromises, ad hoc solutions. Still, the major efforts laid down in the closing of the product guarantee that lessons have been learned by all participants.

Let me return to *the question of why GirlsROM did originate where it did*. From *a macro perspective* we can answer that it was fairly obvious that it would! To be less obscure: With the increased accessibility to multimedia, one can argue that it was only a question of time before a product like that was brought to light. Still, many of the bigger actors in the cultural industries sector were marked by a certain nervous perplexity. As we have seen, Det Nye felt that they had to relate to multimedia, but lacked the confidence and the competence to initiate proper actions of their own. This also goes for other big actors, including sponsors. Thinking structurally, we can therefore ascertain that was a room for newer and smaller actors to enter. Their advantages - e.g. a built-up competence, an ability to innovatory thinking and acting at low cost and risk - could under the circumstances be considerable and decisive.

From *a micro perspective* circumstances will not do the whole explanation. We need to account for what made precisely GirlsROM “the right incentive”. I think this is a little more than just luck and accidentals. Let me start by giving some credit to the designation of the project. As an effort to domesticate technology, to give femininity an elucidated place within multimedia, the connotations invoked by “GirlsROM” are very suggestive. I have tried to show how the framing metaphor was belaboured into a workable project by the guidance of “action concepts”. The evolving notions of “knowledge”, “quietness” and “easiness” served both as motivating forces for development of the content *and* as argumentative tools in the enrolment of other actors. It turned out that the action concepts advanced by *this* small actor were inducing and flexible enough to be taken up by and translated into the interest of other, bigger actors, thus rendering the realisation of the project possible. So, in this, the story of GirlsROM is *an instance of how micro can become macro*. Or, at least, “hero for one day”.

6. Controversies

But the world did not stand still. During the spring of 1997, as the launching of GirlsROM was closing in, the relationship with Det Nye changed. To understand why this happened, we need to trace some parallel developments within Det Nye and its publishing house, Hjemmet-Mortensen. Among the magazine publishers, Hjemmet-Mortensen was early into multimedia. Their overarching policy was that all their magazines should be on the Net. Already in

the winter of 1996 all the biggest magazines, including Hjemmet¹³, Donald Duck, Det Nye and Vi Menn¹⁴, had their own homepages. In addition did niche-magazines like Techno and PC-World regularly publish their monthlies with supplementary CD-ROMs.

Still, as earlier mentioned, the running of Det Nye's homepages came to a standstill after a short while. Det Nye had set up their service with the aid from a company named New Media Science. But the expenses of having this company to run it regularly was unreasonably high. On the other side, the magazine's editorial staff lacked the competence, interest and time to do it. The position the marketing editor found himself in at that time, then, can be seen as typical for the ambivalent relation many of the traditional cultural industry actors had towards multimedia. Mr. Ludwigsen definitely wanted Det Nye to use and exploit the possibilities of the new media, but yet he did not know how.

At about the same time Ludwigsen received the proposal from Blekkhuset A/S, he also received another proposal. A woman named Nina Furu made the offer that she would be the editor of and run the net-service of Det Nye. She had been writing about various trades for Det Nye on a freelance-basis, and had multimedia experience from operating some early pilot services in Hjemmet-Mortensen. As in the case of Henningstad's proposal, Furu's proposal was met by approval and enthusiasm from the marketing editor. The employment of Furu seemed to solve the headache Det Nye had over running the net-service, and according to her own figures, the number of monthly visitors increased from 5 000 to 50 000 within half a year. Among Furu's contributions was the creation of Nettie, a virtual net companion, the operation of a chat-line and the establishment of an archive.

At short notice Ludwigsen now had established two separate investments in multimedia. It is striking that both Henningstad and Furu in strong terms praised the collaboration with Ludwigsen, Furu for instance stating that "*he was a man of visions*". What is even more striking is that neither knew about the other. The first time Furu heard about GirlsROM was at an out-of-town meeting with one of Det Nye's biggest advertisers. Henningstad had called upon this company several time to sponsor her project, and the company wanted to have Furu's opinion about its connection to Det Nye. Furu was not happy by being unable to answer the question. Returning to Oslo, she had Ludwigsen put up in a corner, demanding an account of what was going on.

Undoubtedly, Ludwigsen can be accused of have been riding two horses. What is even more decisive is that in January 1997 he jumped off them both, quitting his job. Now Henningstad had to make her dealings directly with the

¹³ Translated: "The Home".

¹⁴ Translated: "We Men".

editorial staff and Nina Furu. The contractual agreement still regulated the progress of the CD-ROM, but Det Nye was no longer interested in collaborating on practical matters. Furu concerned herself to protect what went under the flag of Det Nye and Hjemmet-Mortensen, while the editorial staff demanded a series of pictures removed short before dead-line. When GirlsROM was launched together with the June-edition of Det Nye, it was without mentioning inside the magazine. According to Henningstad this was due to editorial boycott, according to Furu the reason was late delivery of the review copy.¹⁵

Meanwhile, Furu had decisively strengthened her position inside Hjemmet-Mortensen. In January 1997 she was appointed as editor of "HomeNet" ("HjemmeNett"), a joint investment by the three big actors Hjemmet-Mortensen, Orkla Media and Egmont. This was planned as an umbrella service, that would receive material from all the content providers inside the three conglomerates and a limited group of external companies (including the Swedish telecom, Telia). Put simply, the biggest investment targeted at the Norwegian households so far. Reflecting on how she has done the grades, Furu comments: *"I've worked on the Net for a period of one year and eight months, and today I possibly possess the most senior chair of net-editors in Norway. It's quite ridiculous"*.

Launched September the 25th of 1997, HomeNet carried out a giant campaign for the new service. No less than 800 000 promo CD-ROM's were sent out to Norwegian households, bundled with several magazines and through mail.¹⁶ HomeNet is an Internet-service aimed "at the whole family", and in the marketing it is emphasised that the service can be adopted to each family members needs and wishes. This is done by a classification of the information through a key word system, that gives the users the possibility to pick in advance the categories and topics they are most interested in. Furu's visions for the new service are immodest: *"HomeNet is to be the arrowhead that drives Internet into 'the thousand homes'"*.

At Blekkhuset A/S, Henningstad is preparing for the 1998-edition of GirlsROM. Based on experience from this edition, the next edition will introduce new topics: jurisprudence, psychology, homeopathy, decoration. Blekkhuset A/S and Det Nye are still quarrelling over the contractual agreement. For the next edition Henningstad is seeking new distributors.

I will now ask: Why did Blekkhuset A/S come on colliding course with Det Nye? Maybe the clash was inevitable. *But what did I witness? A battle over market shares or over images of technology and femininity?*

¹⁵ As this is an on-going judicial twist, we are not allowed to go into further details.

¹⁶ The Norwegian population is 4.4 million.

I think it is important to acknowledge that the field of multimedia content provision is rapidly becoming something more than a fun fair. Generally, my story can be described as a case where the backdrop or "translation terrain" (Brosveet 1998) changes in the course of a project. The important alteration was that the bigger actors were maturing, developing strategies and competence in multimedia. It is symptomatic that the first CD-ROM-distribution to go with one of Hjemmet-Mortensen's bigger magazines - the niche-magazines held aside - was done through an outside incentive. The first CD-ROM-production done inside Hjemmet-Mortensen aimed at a bigger audience, was released only a few months later and exceeded the first one far by proportions. Even if the two releases admittedly were based on decisions at different levels inside the company, from a macro-perspective the timing and the size should not be seen as accidental. My story also shows that at the micro-level there were some important overlaps of the actors involved in the two investments.

But to which extent were the controversies also part of a battle over representations? In the following, I will concentrate on the images of technology and the user embodied in GirlsROM and HomeNet.¹⁷ It must be remembered that both GirlsROM and HomeNet represent ambitious efforts to attract new groups of users to multimedia. Both direct their efforts at private homes/ everyday life usages (e.g. not public arena/ job usages). GirlsROM's designated group spanned young women in the ages between 15 and 30, a group so far not very well represented among the actual users of multimedia. HomeNet has an even more comprehensive designation. Furu: *"The golden days of the 20 year old data nerd is gone... Or, he might go on as he wants. But we want the mother and the grandmother and the grandfather and the little lad at four to go along with"*.

An important common stamp of GirlsROM and HomeNet is a shared understanding of how one should not go about to gain the new groups: no more bits and bytes and bandwidth. Instead, the investment is in being good at content. Here there are some interesting similarities as well as differences between the two. Also for HomeNet I have identified action concepts that seem to have been especially important in the microstructuring of the project (aside with right time, right place, etc.). These are *"trustworthiness"*, *"totality"* and *"individualisation/ heterogeneity"*. I find that each of these stand in a particular relationship with the action concepts of GirlsROM.

"Totality" refers to the idea or ambition that HomeNet shall be able to give you *all you'd wish to use Internet for, at one spot* (their slogan). HomeNet tries to accomplish this by linking up the variety of content providers

¹⁷ Omitting Det Nye's net-service, which is more restricted in vision and makes a poorer contrast.

represented inside Hjemmet-Mortensen with selected external goods-, content- and access-providers. Even if the scale is different, here there is a parallel, not only in performance, but in purpose, to the bundling of special writers and sponsors on the thematic parts of GirlsROM. The link between the totalling ambition of HomeNet and GirlsROM's concepts of knowledge, quietness and easiness becomes the more evident when we connect it to the metaphorical manoeuvres performed in both instances. Sørenssen (1997) have suggested that the massification of cyberspace is accompanied by a change in the use of metaphors, from metaphors referring to movement and endless spaces to metaphors referring to the known and to located places. Both GirlsROM and HomeNet seems to be particularly good examples of this (HomeNet even trying to offer a safe surrogate for the more dangerous "real" net-surf). It is of course very difficult to claim anything about influences. In the cases just mentioned, we have at least a co-occurrence, that might have been informed by both projects belonging to the same - smaller or wider - "learning economy".

However, I are also tempted to suggest that HomeNet is representing an alternative and arguably "later" or "more modern" configuration of the (female) user. This is said with respect to the action concept of "*individualisation/heterogeneity*". GirlsROM embody specific assumptions about its user, e.g. that she is knowledge-seeking, have her interests in specific topics and prefers quiet experiences. HomeNet is trying to circumvent this kind of assumptions. Instead, it tries to give the user *the possibility to choose in safe surroundings*. As mentioned, this is accomplished technologically with the introduction of the key word subscription. However, the subscription also bears on a marked out philosophy. HomeNet is stating there *here you'd be allowed to do whatever you want to do*. To give the simplest example, HomeNet makes it perfectly current to be a woman and utilise the service for "80 % games and 20 % knowledge". Thus, HomeNet is presenting a weaker configuration of the user than GirlsROM.

Still, it is doubtful whether these differences can account for the turbulence between the two projects. In this respect, I will let the third action concept stand for the explanation. The concept of "*trustworthiness*" is strongly connected to the problem of "information overload", i.e. the impassability and lack of quality control in multimedia. The key-word subscription should be recognised as an internal effort to come to terms with this problem. However, the concept first of all applies to the external world of Internet. The assumption is that *the user wants and needs someone she can trust*. This is the rationale behind Furu's concern with and efforts to gain control over what is passing under the flag of Hjemmet-Mortensen: "*We want to tell that this (i.e. what's found on HomeNet) is material delivered from serious, respected content suppliers, not from three teenagers from a small village town that is pulling out*

some rubbish ... We have respected, established brand names that have a certain trustworthiness, right? That trustworthiness we do wish to bring with us into the Net". In my view, it is little doubt that GirlsROM became a victim of this hoisting of the flags.

7. Enterprising women and multimedia

GirlsROM was a multimedia experiment aimed at non-expert or not-yet users of multimedia. In order to create these new user-groups, the initiator had to invoke new conceptions of what the multimedia technology are like, and of its relationship to users. As principally stated in the beginning of the paper, when technological experiments of this character are carried out, we would expect that both the technology and culture are changed in significant ways. GirlsROM is a very good example of a double, mutual reconfiguration of both technology and gender, in where, on the one hand, we witness an attempt to translate the technology into a feminine artefact, and, on the other, to change the understandings of femininity (Lie and Sørensen 1996, Berg 1996). The end-result can be looked upon as an effort to regulate and "freeze" a conception of what the relationship between women and multimedia should be (Sørensen 1997, Lieshout, Egyedi and Bijker 1998).

As a political configuration of femininity, the most important contribution of GirlsROM is that it seeks to establish a model for a positive relationship between females and multimedia. While official strategies to promote computer literacy among women, usually have set off from the assumption that women's relationship to computers are problematic in nature, GirlsROM holds that the use of computers makes fun.

Looking at the distinct features of the configuration, the CD-ROM might be seen to embody a rather conventional construction of femininity. It is a configuration that is in accordance with Henningstad's interpretation of gender, that she might took for granted, but that is clearly only one possible interpretation. When Henningstad worked out the action concepts of easiness, quietness and knowledge, she tried to develop a product on the premises of women's interests. Still, these concepts were also defined as a negation of a comprehension of male computer use. Femininity is configured as something else, something different. In order to develop a ground for cultural identification with the computer, this might be assessed as an adequate strategy - a kind of a "necessary step" - in an area where conceptions are few and rudimentary. However, we also saw how HomeNet represents a reconfiguration - an "untying" - of these assumptions. Here, locus is on the multiplicity of uses and the freedom of choice. Interestingly also, in the newly launched GirlsROM '98, two games for girls are included - girls are now allowed to play.

If it does not dramatically challenge conventional stereotypes of femininity, GirlsROM - and HomeNet as well - performs a reconfiguration of the multimedia technology in quite interesting ways. Preston (1998) has commented on how the multimedia technology very often are presented through "transformative rhetorics", stressing the perceived rapid pace of technological change in the multimedia field and the urgency to adopt to these changes. A first analysis of advertisements in computer magazines in eight European countries (Aune, Nordli, Spilker and Sørensen 1998) clearly confirms Preston's assessment. However, in the case of GirlsROM and HomeNet, something different is happening.

The rhetorics of both GirlsROM and HomeNet are transformative, but in a sense that "retransforms" the "transformative rhetorics". The promise of "quiet experiences" in GirlsROM and the simplifying ambitions of HomeNet are indicative in this respect. The reconfiguration is also very clearly mediated through the use of metaphors. The familiarity promoted by the place-metaphors ("room" in GirlsROM and "home" in HomeNet) differ markedly from the metaphors conveying change, pace and movement. In my view, this is not a contingent feature of these products, but should be interpreted in relation to the aim of these products: to attract users not familiar or comfortable with multimedia and the hype surrounding it.¹⁸ In this sense, my story is a story about how multimedia is reconfigured from a "front-line" medium to a "popular" medium.

The social learning approach emphasises the learning processes the reconfigurations of technology and culture are embedded in. In particular, the actors monitoring of their own and each others actions, are scrutinised. In the story of GirlsROM we have met many actors that are into learning. We saw e.g. how two of the sponsors, the companies LaMote and Twinning's Tea, used the participation as a way to gain their first experience with multimedia. If we concentrate on the learning lessons for my two principal characters - the one-woman company Blekkhuset and the media giant Hjemmet-Mortensen - I will argue that the two most pertinent lessons to be drawn concerns *the importance of timing* and *the importance of building constellations*.

Blekkhuset had some advantages as a small actor that probably were important for the realisation of the project. Amongst these are of course the necessary competence, a competence that we saw Det Nye at that time did not possess. But I can also point to other factors, such as the ability to move fast and avoid complex considerations and delaying resolutions. All this partly accounts for the successful timing of GirlsROM. In addition, Henningstad was

¹⁸ Compare also with the employment of the "room"-metaphor in Kerr (1998).

able to work out and sell the project on the basis of the substance and plasticity of the action concepts.

As GirlsROM is planned as an annual event, many of the experiences from the treatment of the action concepts can be directly exchanged. Lessons from working with the networks and the content, as well as user feedback, can be drawn upon straight. Thus, the outcome are adjustments. The content will be extended and the user group altered, alongside attempts to strengthen the inner and outer arguments for the project.¹⁹ Henningstad expresses strong faith in the continuous existence as a niche-actor: *"We are a niche company and with a niche product that I think owns the future"*.

Still, in the light of my story, this optimism is in need of a certain modification. Generally, we must believe that it still will be possible to establish oneself with home-pages on the Internet without too much expenses or formalities (though we can predict attempts to limit content-provision in various ways). We should also expect the prices of CD-ROM productions to fall. But my story is a very good illustration on how some doors successively will be closed. These are the doors to the money. It seems likely that the cash flow increasingly will take on fixed courses.

Thus, for small actors to be able to make a continued living in multimedia, it will not necessarily be enough to be the first or to become better. As I see it, additional action will be needed. I will suggest that the survival of small actors will depend of the successful implementation of one of the following strategies:

- *specialising*, being able to develop attractive specialised services.
- *compliance*, increase the capacity to meet demanders requests.
- *growth*, and thereby becoming self-contained.

Still, I expect another scenario to be the more frequent: Small actors, that have proved excellence, increasingly becoming absorbed by the bigger actors. A funny example of this can be mentioned. In the spring of 1997 Det Nye announced a competition over the best home-page designed by women. Three months after the election had all of the three price-takers been appointed for lucrative multimedia-jobs.

Regarding my big actor, I have shown that important changes took place inside *Hjemmet-Mortensen* in the course of 1996 and 1997. From conducting small-scale experiments and nose about for different impetuses, the concern finally decided the time was right to enter multimedia with all their weight. It is important to recognise that the experiments constituted a learning reservoir that pertained to the whole concern. At least in this respect, HomeNet and future

¹⁹ Part of this picture: Henningstad can now show that researchers found her project worth studying.

investments in multimedia bears on the experience from GirlsROM and other trials.

I also think it is possible to take the argument a little further: First, GirlsROM created a "program" for how to attract non-expert users that later attempts can do modelling on. I know that that the central persons involved in HomeNet had knowledge of and did talk about the other project. Second, Hjemmet-Mortensens most pertinent lesson from participating in GirlsROM did not so much concern content as control, or it *concerned control by (and of) content*. The concrete actions taken to assure control is incorporated in the development of a multimedia philosophy that legitimises this control. Here, in this negative, but very social sense of social learning, the experiences from participating in GirlsROM became moulding.

This also illustrates how social learning generally can not be understood as a psychological process or something released from conflict, but as an appreciation that takes place within networks and structures of interests. The reconfigurations of technology and gender gave rise to a battle over positions as well as understandings.

In this paper, focus has been on the lessons and the role of "intermediaries" (or "intermediate users") in the cultural industries in the possible femininisation of multimedia in Norway. We may now ask whether GirlsROM works? Does it help to create computer enthusiasm among women? I have not inquired into the user-side, but I think it is possible to give some indirect appraisals to this question.

First, other content producers (and actors in the surrounding networks) form a very important group of users. The general interest within the cultural industries, as well as the rivalry and competition, shows that the industry perceives there is an emerging market for multimedia products aimed at women. This, in turn, means that women are increasingly provided opportunities and occasions for learning. Second, a comparison with Nordli's study of computer enthusiastic girls in Norway (1998a, 1998b), indicates that there might be a good match between GirlsROM and the computer identity these girls developed. Especially, the concept of quietness seems to be in accordance with the girls use of computers to come in touch with their inner thoughts.

The macro-implications of GirlsROM and related, market oriented or cultural industrial attempts to configure the relationship between technology and gender, is interesting. With the multimedia turn, content producers have come to form an especially important group of intermediaries (Preston 1997).²⁰

²⁰ Perhaps overtaking the role of system designers in the area of the "information computers".

Following Østby (1993), we can assess the four aspects of our intermediaries' contributions to cultural change.

First, they *interpret and reconfigure* the technology. With the targeting at non-expert or not-yet users, GirlsROM and HomeNet broadens the spectre of possible utilisations. While themselves from one angle products of the increased availability of multimedia, they contribute to redefine the meaning of it, thus rendering new users (and products) more probable.

Second, they *intermediate* between the technology and the users. Both GirlsROM and HomeNet are very ambitious in this regard. They vision themselves as missionary agents for bringing the new technology out to ordinary people, or more precisely to transform the technology and give it a content that is useful for ordinary people.

Third, they *initiate* experiments. The concept of a "learning economy" highlights how experiences and experiments are reflected on and taken up in new experiments, thus developing, modifying and reconfiguring the field of multimedia og women. The inclusion of games in GirlsROM '98 is a good example on this.

Finally, they *regulate* the interpretations of the technology as well as the delegation of actors. The role of the intermediaries in the cultural industry is all the more interesting when compared to the modest role played by the education system (Aune 1998, Nordli 1998b). It is a certain irony in the fact that the leaflet "Internet-guide for girls" is issued not by any educational authority, but by Libresse, the tampon producer. Generally, the far-arching ambitions dispelled by the cultural industrial agents will be expected to constitute an important part in the continuos femininisation of multimedia in Norway.

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