

**“It actually separates us a little bit, but I think that is an advantage”:
The management of electronic media in Norwegian households¹**

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Abstract

This paper examines the ownership and use of ICTs in the home. It is based on in-depth interviews with 15 “teen” families in the Oslo area carried out in the summer of 2000. The paper develops the notion of zones, spheres and rules and tools with which to see the influence of Information and Communication Technologies (ICTs) in the home. Zones are the various spheres in the home such as the living room, the more functional kitchen and the more remote bedrooms. Each of these has special demands in terms of ICT furnishings. Spheres are the more transitory needs and interests of individuals within the home as they manage the ambiance and use the home in various ways. Finally, rules are used to codify the use of ICTs in various situations. The article finds that within the context of the homes that ICTs are an often used actively to 1) provide a distinction between various zones in the home, 2) bring together and/or isolate individuals in the home. This results in a discussion of the ability of ICTs to divide or to unite the family. Looking specifically at the placement of ICTs, we found that the PC was problematic in the context of the living room, sometimes accepted into the bedrooms but was never mentioned as a part of the kitchen. The TV has found its place in the living room but is more problematic in the kitchen and in some, but not all parents’ bedrooms. All of this is contradicted when in children’s bedrooms where one often finds a nascent apartment as the child approaches the establishment of their own independent life.

Introduction

This paper is about the integration of information and communication technologies (ICTs) into the home and also the ways in which ICTs are managed vis-à-vis the interests and needs of household members. The analysis is based on 15 in-home interviews with families in the Oslo area. In the course of the paper we outline their efforts to integrate ICTs into the various physical portions of the home. The material also points to the way in which family ideologies concerning the ownership, use and placement of ICT are played out within the household.

At one level the home consists of fixed zones that are partitioned by walls, plumbing, electrical outlets and the intentions of the architect and the builder. Thus, the various rooms have their intended purpose, as well as the necessary equipment and appointments with which to fulfill that intention. At the same time, there are slow, changes in the structure of the home. A new chair is purchased, new curtains are bought and hung, and the like. On a somewhat more dramatic scale, a wall might be either set up or removed, a former storage space may be refurbished and become a second living room. Thus there is a certain, perhaps slow, evolution in the home.

The lives and needs of families, particularly those with children, change much more quickly. The needs and interests of the children develop and change. The way in which they use the home and the demands they make of it also change. Hobbies come and go. Interest in certain types of TV programming change i.e. the shift from Saturday morning cartoons to soap operas in the evening. The parents try to channel this activity and energy into directions with which they feel comfortable and that are dictated from their moral understanding and desires. This is the basis of the rules regarding the use of the TV and other devices.

Finally, there are changing sets of immediate demands that are played out within the home. One person wants to watch a news program while another is in the middle of doing their homework in the same room. One person wants to listen to music but another wants to have a conversation with a friend. Thus, there are several overlapping time scales describing the dynamic nature of the home.

Within this situation, the ICTs gain their places (see Guttu, J. Jørgensen and Nørve, S. 1985) and become crystallized institutions. The TV has become a fixture in the living room while the telephone has a track record in the entrée. Many people consider the PC as a candidate for a workroom, but this is not a feature of all homes. In addition the PC is constantly changing both in terms of its functions and in terms its size and façade.

A general summary of the material here is that people discuss (read: argue) about the selection of TV programs and the placement of the PC. When considering the question of ICTs impact on the moral economy of the family we come away with a complex picture. At one level ICTs integrate the family while at the same they are a disrupting element. In many ways this is a reflection of our times in that the TV is a social experience in an age of increasing individualization of technology (driven perhaps by the decreasing costs for the devices) and a period in which the PC has invaded the home, but still has not found its “institutionalized” location within the home.

We will look into these issues in the following material. In the next section of the paper, we will review the method used to gather and analyze the interview material. In addition, we will look into some more general theoretical work addressing these issues. In sections three to six, we look into the interviews. These chapters address the respondents’ understandings of the physical zones of the home, their personal spheres and the rules concerning the use of ICTs. This is followed by a discussion of the ways in which ICTs either bring families together or separate them. A theme that goes through all of this discussion is the way in which families manage technology for their various ends and how they develop and maintain ideological positions.

Method and theory

Method

This paper builds on data collected during 15 in-home interviews with families wherein teenagers were living at home. The use of this method answers more what, why and how instead of how many. The focus is on content, quality and signification. Depth-interviews give the informants the possibility to describe their everyday life. The empirical data produces during the interviews, and the interviews are therefore the researchers instrument to knowledge (Fog 1997; Glazer and Strauss 1967).

In this project, the teenagers have a central role. Young people are quick to adopt and also active in lobbying for the adoption for new technology. They also make frequent use of ICT for entertainment purposes. It is interesting to see their role in lay of ICT in the domestic sphere. The interviewed families live in the Oslo area. They all have ISDN and they live in different type of dwellings. 14 of 15 households live in a traditional family-pattern with both parents living in the home. There are differences in the income of the families. The differences come clearly through the families' housing standard. The homes of our informants range from smallish apartments to larger single-family homes by the seaside. The placement and use of ICT are conditional on of spaciousness and arrangement of rooms and furniture in the homes.

The words of the informants describe their relationship to the decoration and appointment of their homes. The thing that is striking here is the findings are found in so many of the interviews, i.e. the difficulties association with TV viewing, the indeterminacy in the place of the PC, the ambivalence vis-à-vis teen's use of the various media. They are like a mantra arising from the data.

The themes discussed here arise out of the data in the tradition of inductive research. The completed interviews were transcribed and analyzed via the use of text analysis software. In this analysis the categories we describe below arose and their contours became apparent with iterative readings of the source material.

Theory

Like other analyses of ICT in the home, this analysis attempts to place the ownership and use of technology into the social and physical context of the home. This approach assumes that we have notions regarding how various objects in the home should be placed and displayed, be it artwork, technology or last week's laundry (Author I, et al, Silverstone and Haddon 1996). The objects one consumes and the way that they are displayed provides others with insight into their competence as a social actor. These items are not simply physical objects, but rather a part of our identity (Gull-estad 1994, 1992). Thus, one apportions effort to the purchase and maintenance of items that are used and cultivated for their symbolic effect. At the same time we use various ruses in order to cover over the elements in the home that might detract from the impression we intend to make. In Silverstone's well-turned version of W.I. Thomas' observation he says, "in consumption, we communicate. And . . . that communication is real in its consequences." (1994, 116).

This can be taken further with Leiss (1990). He indicates that consumption has a double symbolic aspect. The symbolic aspects in design are not only important in production and marketing. They are also used to set off life-styles, which indicates social conditions. The design one chooses in their home reflects one's place in the social hierarchy, vis-à-vis economical and cultural capital. Differences in social class become visible through taste and for example home decoration (cf. Bourdieu 1995).

The placement of objects in the home is also, often a theme for discussion among household members. There can be different ideas regarding which objects should be included in the household's array. Various groups and alliances can be established to maintain a style or purchase a particular artifact. In Norway, an inordinate amount of resources are used on home decoration. The numerous interests and creative zest for home decoration in Scandinavia has a resemblance to a type of folk art, through people's personification of their homes. The home decoration may symbolize social class. It can also be verbalized and codified into ideological positions that are used to either encourage or prevent certain lines of action, such as the purchase of a piano or the placement of a TV in the kitchen.

Further, once in the home, objects have a type of career wherein their placement, use, function and perceived value shift and change over time. According to Silverstone et al. this can be described as a type of domestication (1992; Silverstone 1994; Silverstone and Haddon 1996). This approach suggests that objects are 1) *appropriated*, that is purchased, 2) *objectified*, or planned for a certain type of display 3) *incorporated* into the actual display and routines of the home and finally 4) *converted* into an integral part of the home's identity. One is reminded here of Berger and Luckmann's process of institutionalization wherein a behavior or object moves from its social construction into a type of taken for granted institutionalized status (1967). This perspective is useful here, but it does not go far enough. Objects and the social flux of the home are also managed through the negotiations over the varying needs and desires of individuals. Artifacts are not simply placed in the home and left there to gather moss until they are replaced with other more current versions. Indeed, the placement and use of ICTs are elements in an ongoing process. Where domestication and institutionalization perhaps indicate a one-way process wherein the final resting place of the artifact is eventually achieved,

one might also imagine a slightly more dynamic approach. Instead of seeing the integration of artifacts as a linear process we assert that it is an ongoing. Where it makes sense to place the TV in the living room when children are infants, it may be better to put it into another more remote portion of the home as they enter preadolescence. Where a desk top PC is not seen as an appropriate portion of the living room, a more mobile PC can perhaps be more easily integrated. Thus, instead of asserting domestication, one might speak of retraining.

The data we examine below indicates that there are three general themes associated with the placement of ICTs in the home. These are physical zones, personal spheres and rules. The zones are generally the physical areas of the home. They include ceremonial areas such as the living room and the dining room, functional areas such as the kitchen, work-rooms and bathrooms and finally private areas such as the parent's bedroom.

The physical zones are not simply a space, but they carry with them expectations and meanings. The ceremonial portions of the home are where the family often displays a sense of esthetics. It is where the best furniture and most precious objects are on display. According to Gullestad, it is the "cultural main stage of the house. The living room [in Norway] is the main room for display and has a higher priority than all other rooms. It is the most public room, where guests are received" (1992 67-8). Ironically, in smaller homes without secondary "dens" the living room is also that room in which the family can drop facades and relax. Thus, in some cases the same space is both the most public and one of the most private rooms, depending on the context (Author I, et al).

Beyond the physical zones of the home there are the personal spheres, i.e. individuals' preferences and desires for a particular ambiance. Thus, one may prefer a certain type of lighting, music, temperature. The personal spheres can be quite short term or they can become crystallized into something approaching the permanence of a zone. It might be that only wants light in a room for a specific short-lived task. On the other hand, one might be able to assert a claim on a particular part of the home, such as a specific chair or even a specific room on a quasi-permanent basis. Thus, one always has their glasses, or knitting easily available there and the radio is tuned to their favorite station. In this case, the personal spheres and the zones of the home may be identical.

Where there is no question as to the "ownership" and boundaries of the zones, the personal spheres are not problematic. However, when the spheres overlap and disturb others, there may be the basis for conflict.

The physical zones and the personal spheres that organize the home, describe the various, some time disharmonious needs of the residents. In the latter case there may be the need to manage the activities in a particular space through the placement of the ICT, or the establishment of rules regarding how, when or whom may use the space. One can see the management of technology in the following citation:

Interviewer: You talked about building a basement den. Is that to move TV use a little?

Father: It is more to move the kids (laugh)

Interviewer: To move the kids.

Father: Yeah, so that they have their own place to collect, with a little room.

Mother: To have them at home, but at the same time that we have our . . . that we . . . both that we can sit in peace and quiet and have our TV evening. Watch our programs.

Rules are another type of management wherein there is a type of standing verbalization, or canonizing that describes either the possible uses of an area in the home, the traffic patterns vis-à-vis certain artifacts, or the moral economy of the various devices. The rules may be derived on the spot but more likely; they are the operationalization of a type of generalized family ideology. By ideology, we mean the readily available legitimations for a particular line of reasoning. These usually indicate that those who share the ideology have talked about the issue before and have, perhaps come as a set of commonly held statements that reflect their more or less agreed upon positions. In addition, those who hold the position are often active in the collection of situations that support their perspective. The ideology does not need to be consistent or global. Thus, the couple may have an ideology, in this sense, associated with the correct color scheme for the living room or the appropriate way to clean the bathroom. The point here is that it is the common property of a group of persons and that it is used in the management of everyday life.²

There is one last issue before going over to the analysis, that being the role of technology in the home. It is clear that the focus here is on the ways in which ICTs function in the home. Both the television (Boullier 1993; Lull 1980) and more recently the PC have been the object of academic interest. Their characterization (Silverstone 1994; Haddon and Skinner 1991; Haddon 1992), role in the ritualization of everyday life (Selberg 1991); and their social functions (Meyrowitz 1985) have been examined.

The work here shows that this is unfinished business. After several decades, in the case of the TV and 10 – 15 year in the case of the PC, their final social status has not been achieved. On the one hand, they provide a focal point for social interaction and at the same time, they are the object of fierce contention. New strategies for the maintenance of these

² For a more global discussion of ideology, see Mannheim (1936) and Berger and Luckmann (1967).

devices are constantly being minted and just as quickly new variations of the technologies are being consumed. With these thoughts we will now turn to the actual material gathered in the interviews and hear what it has to say.

ICT and the physical zones of the home

As outlined above, there are practical, functional and aesthetic aspects to the appointing and decoration of a home. The various zones within the home each have their own functional requirements, their practical solutions and their demands for aesthetic considerations. These considerations are not simply in relation to the physical arrangement of furniture but also encompass the lighting, the ability to introduce sound via, for example a stereo, the use of color and the regulation of temperature. The way people create their home surroundings with products from the mass market is the way they want other people to interpret them and their family life (cf. Featherstone 1991).

One does not normally think of ambiance in certain areas of the home, such as storage spaces and the rougher working areas. None-the-less, the placement of objects, the use of lighting, the efforts accorded to cleanliness, the demands for heating or cooling, etc, all combine to provide each space with a feel. This may be carefully thought out, casually accomplished, or the result of neglect. In most cases, however, it is an achieved state.

The material indicates that the informants tried to manage the ambiance in the various zones. In this activity there are generally a set of "taken for granted" elements that are a part of the various zones in the home, including areas such as a sofa in the living room. A TV in the toilet, for example, is a rather dramatic break with that which one takes for granted.

There are the fixed elements of the zones, and those that are temporal and transitory. Walls, windows fixtures, and even the wiring are, of course, fixed. Lighting, the colors used in decoration, the placement of furniture etc occupy a middle ground and finally the specific lighting arrangement, use of scents, the type of music etc are quite transitory. Indeed, the more transitory elements are those that we describe as the personal spheres within the context of the various zones.

In this section, we will consider the relatively fixed elements in the various zones of the home, including those that can be changed only with some effort. Indeed we consider the degree to which the informants would consider adding new elements to areas that have often found a stable form. We will look into these elements for the more public areas of the home, the functional areas and finally the bedrooms.

The living room and ceremonial zones of the home

The living room and in some cases the dining room are the most public of the spaces within the home. It is that portion of the home into which guests are directed. It is often where objects are purchased and placed with the intention of impressing visitors. In Goffmanian terms it is the front stage of the home (Goffman 1959) In larger homes this area can be vestigial in that it is only used for ceremonial occasions such as parties, visits and the like. However, in the smaller homes and apartments, the living room is also where the family relaxes. Thus, to use Goffman, the living room has characteristics of being both the front and the back stage alternatively (Author I, et al.). This can make it difficult to integrate both the functional use of the space and the need for a ceremonial area within the home.

The living room, coziness and the placement of the PC

The rise of the PC, and in particular the more common desktop PC, has provided a complicating factor when considering the living room. The material in the interviews indicates that the PC was not seen as a natural element in the living room. The television has faced the same issue during its introduction in the 1950's and 60's. It broke with the tradition of the living room being a place for reading, conversation and other similar pastimes. (Guttu, J. Jørgensen and Nørve, S. 1985). One finds the same type of discussion now in relation to the PC. The material provides insight into the general characterization of the PC, strategies for camouflaging the device and, in some cases, attempts to integrate it into the décor of the living room. The PC seems to carry with it the character of a functional or a working area. This clashes with the sense that the living room is intended to impart, such as the sense of leisure and social interaction.

The most common idea was that "a PC actually doesn't fit into the living room." in the words of a woman who lived in a smaller apartment and actually had a PC in her living room (Int. 11, apartment). The same theme arises in the following sequence from a family that lives in a five year old home that they built themselves.

Interviewer: Could you imagine having a PC and a TV in the same room in some way?

Father: No, we can imagine having it the way we have it (...) That we, when we work with a PC then we go in the room where the PC is

Mother: And I think it is very noisy, the sound of the fan from the PC.(...)It is that real disturbing background sound

Father: It has never been discussed here and so to have a PC in the living room. (Int. 5 House)

They have used a lot of effort to arrange their home in a certain way. Indeed the father, who is an electrician, has invested a lot of time and identity in the specific arrangement of the home and the technical infrastructure. Thus, it is not strange that he is resistant to the rearrangement of the various devices.

The sequencing of the passage is also interesting in that one sees in the sequence the rejection of alternative ideologies. The placement of the devices has been achieved either through negotiation or fiat. The father does not seem open to alternative interpretations of how one should furnish a home. Towards the end of the sequence, the mother and father build on each other's thoughts and comments in their resistance to having a PC in a common room. This indicates that they are relating a type of family ideology that covers the appointment of the living room. It indicates that it is something that they have considered and discussed before. The interlacing and coordination of the comments indicates that this is a type of institutionalized perspective within the context of the family, it is not something that they are building from scratch. We will see other examples of this familial ideology in other portions of this article.

Beyond the general ideological opposition to the PC in the living room, there are other points of opposition. In several cases, the informants mentioned that the device was "not so very pretty."

Mother: I thought about it, for example I think that it is fine to have a black TV that is a little neutral in a way . . . I think that generally technology is ugly. You know, a PC and such is not pretty. I would rather not have it in the living room you know, it takes up so much room. . . yeah. (Int.3 apartment)

While the mother here accepts the TV, the PC is put into another aesthetic class. It is described as ugly and it takes up space. Other informants noted that, there is also the clutter that the PC generates.

Mother: I don't want a PC in the living room because I can't stand all the stuff around it and talking and all the things with that. . . . We sit in the sofa and there is a lot of [TV] watching. That is why I don't want it here. . . . [The PC] belongs more to the workroom. (Int. 7 Town house)

Beyond the machine itself there are also the additional artifacts that are associated with the use of the PC. The mother discusses all the papers and clutter. In general, the comments up to this point indicate that the PC is not an accepted part of the living room. It is seen as a breach with the intended effect that the interviewees are attempting to develop. Where the living room is seen as either the stage upon which the family can present artifacts attesting to their status and cultivation, or the area in which the family can relax and withdraw from the demands of working life, the PC represents perhaps more of a functional, work related element.

For those informants who had extra space in the home, the PC was often relegated to a home office, a child's bedroom or perhaps a den. Others did not have that luxury. In these cases, the incompatibility of the PC in the living room led some informants to discuss their strategies and plans for camouflaging the PC.

By using various visual barriers or via the placement of the PC in the back corners of the living room the sanctity of the space is (partially) preserved from the influences of the PC. Another mother, who because of the lack of space was forced to use her dining room table for the PC, outlined her ideal solution. With the PC in the living room she had no place for the dining table.

We have seen up to now how the PC elicits various ideological responses and prompts families to use various physical strategies when thinking of the PC and the living room. Generally, the data shows that there is a rather strong sense, in the words of one mother that "it isn't cozy (*hyggelig*) to have a PC in the living room." Coziness is a strong cultural concept in Norwegian culture (Author I and Wilhite 1990). It describes a variety of situations such as a cozy conversation, a cozy visit, and even a form of greeting and parting. Thus, it is not odd that the PC's placement in the living room will involve this form of description.

An interesting counterpoint is provided by a family of three who lived in a large and somewhat lavish house on the outskirts of Oslo. In spite of the fact that the family had many alternatives, they had the PC in the main living room.

*Mother: No, [our son (16)] he thinks it is cozier (*hyggeligere*) [in the living room]. . . and that is why we have the PC in the living room.*

(...) We have a PC in the living room because we think it is cozy. Some of us watch TV and others use Internet. He plays . . . You are there where it is happening all together. We think that that is the coziest. So that one isn't in their bed room, the other in the office with the PC and so on. So we have really. . . But it is probably because we are such a little family (...) (Int. 6 house)

Based on this background, the mother and the father in the family develop on this theme.

Interviewer: How do you decide on placement?

*Mother: So that it is cozy (*hyggelig*) to use it. You must. . . , yeah, that is actually it. . . .*

That it is cozy. You know, we are such that we want it to be pleasant when we use it.

Father: Instead of sitting down in the basement you know, in our own individual room down in the basement with the PC, while the others sit up here, you know, instead we put it up here in the living room and then we are all together.

Interviewer: Nobody reacts to it, negatively . . . having a PC in the living room.

Mother: No, but we have tried to make it a little cozy. It is on a little like old fashion desk and [we] try to make it. . . . [we] have a very good chair and have made it. . . . You know it doesn't look like an office. We light candles there while we are sitting here in the evening and really focus on the idea that it should be cozy. (Int. 6 house)

This approach is an exception to the idea of the placement of the PC in the living room. Rather than being forced to have the PC in the living room this family had the “luxury.” This family seemed to use the placement of the PC to underscore the importance of their togetherness even though they had many other options.

The mother worked to place the PC into the framework of the living room, something that perhaps did not fit naturally into that context but rather needed certain additions and camouflage in order to be acceptable. She integrated the desk and the chair into a general sense of the room and worked to make the PC itself a part of the ambiance there. The family’s motivation seems to go beyond simply the physical placement in that it is also important that the whole family can be together in the living room. Thus, the mother is quite conscious in her placement of the device to achieve togetherness. There may also be a certain control function at play here. It is also interesting to note that the family also seemed to have conceded this collectively. Thus, like the family noted above, there was a common familial ideology covering the appointment of the living room.

Kitchen

The most social of the rooms in this group is the kitchen in that there is a clear functional dimension but often also a social dimension to the room. It is, indeed often the center of much activity in the home and a place where people spend large portions of the day. It is also an area that can be open for guests, particularly close friends. Like the living room there are a range of taken for granted technologies in the kitchen. These, of course include all the devices associated with the preparation of food, the things needed to wash dishes etc and often a small eating area.

An ICT that has somehow begun to establish itself there is the TV, though this is not without question. None of the families had TV in the kitchen, and in over half of the interviews, there is the sense that the TV does not fit into the kitchen. Indeed, during the last fifteen years there has been a trend towards the design and use of large family kitchens. The development is built on the idea that the room serves as a place for the family to rendezvous. The introduction of the TV is a break in this trend (Author II 1999). This comes out in the following sequence:

Interviewer: Are there places that you don't want to have a TV for example. A room .

Øyvind (son 15): In the kitchen.

Interviewer: You couldn't imagine a TV in the kitchen.

Øyvind: No, when I am going to eat I want to sit quietly and eat and not watch TV.

Father: I completely agree. (Int. 10 House)

Spontaneously and without reservation, the informants said that the kitchen should be a TV free zone. Their justification was that it would be disturbing in that context. Others noted that while the TV did not fit into that situation, the radio added to the ambiance of the kitchen. In the words of a mother who lives in an apartment: “[We have a] radio in the kitchen, and that is because it is so cozy (*hyggelig*) and we listen to it in the morning when we eat breakfast and such” (Int. 3 apartment). Others noted that the TV was not really needed in the kitchen since there were other activities that were more central in that portion of the home. Among those who thought that the TV could be integrated into the kitchen, there was the idea that it should not be a full-blown entertainment center, but rather only a small one “only for news and that type of thing” (Int. 6 House). An alternative approach suggested in one interview was that the kitchen should be re-conceptualized into a type of a den wherein both the function of making food and the function of familial entertainment could be integrated (Interview 15, House)

Home office

In the discussion of the PC and the living room given above there was a general sense that the PC did not fit well into that portion of the home. By contrast, many of the respondents felt that the PC should be a part of a type of home office. There was both the sense that the machine itself is “gray and not so very pretty,” in the words of one father. In addition, “there is the way you use it.” Informants talked about the need to concentrate and all the papers and other paraphernalia associated with the PC. These elements augured in the direction of placing the PC into a separate “home office” in those cases where there was extra space in the home or where there were the possibilities for expanding the home. The simple placement of a PC in a room was often not enough. Rather, informants could have a broader sense of the general furnishing of the home office.

Mother: When we added on to the house we were conscious about that we will have a fax, a PC and telephones in there [home office]. That is what we thought.

Interviewer: What is it that determines placement? Did you think about where you wanted the PC?

Mother: Yeah, we did. There should be a lot of room and . . . You need tables and we thought . . . and we have paid attention to lighting and windows, up there. You have to make sure that you don't get reflections and it has to be practical in relation to working when you are going to use that type of media. . . . (Int. 14, home)

The mother here has quite a complete sense of placement concerning the PC. Unlike the mother who attempted to integrate the PC into the living room described above, the mother here is more focused on the PC in a functional, office and homework-oriented sense of the device. It is not simply an appliance to be plugged in, but rather it needs to be placed

into a context. There is a combination of having the room to place the device and the sense that it should be an office like situation. The elements that she describes are the basic elements of an office with the table and the light and the window and the like. The major difference is that it should be near the portion of the house where you normally are. This is outside the common notion of an office.

Those with limited space, and competing demands for the device were left to make awkward decisions.

Mother: But I didn't want [the PC] in any of the kids rooms because there would only be arguments.

So then it has to be in a room that is common and that is only the living room and the kitchen and this room here [a small dining room between the living room and the kitchen] So, it is here.

Interviewer: Are you satisfied with that?

Mother: No, not really. I actually want a work room. (Int. 4 Small apartment)

In another case, the PC workroom doubled as the bedroom of one of the eldest son.

Interviewer: The PC is up in your son's room. Does sharing that work out ok?

Mother: Yeah, actually. It clashes a little though, when we will. . . . If I need to do something for work I have to do it up there and if they are using it for games, then I have to let them know beforehand that in a half hour I have to use the PC. Sometimes it clashes.

Interviewer: That is in your oldest son's (Int. 7 townhouse)

There is a clash here in that the oldest son cannot have the full use of his room. It is, perhaps a little bit of advanced planning that the PC was placed in that room in that the oldest son is on the way out of the household and that the room will be converted into a type of study later on. This same progression is seen in the other cases. After the children move out of their rooms and establish themselves outside the home, their bedrooms are taken over and changed into a type of workroom.

Thus, there is a type of transition as the children begin to move out of the home. The children's rooms transpose to offices or other types of workrooms. This is a theme that will also be taken up below.

The bedroom: the teens' living room, the private zone for adults

Now we will turn to an examination of the bedrooms in the homes. In all cases, each individual, or couple had their own bedroom. In the Norwegian sense of the home, this is the most private portion of the dwelling; at least as far as the parent's bedroom is concerned (Gullestad 1992). It is a place where guests rarely go. Thus, as we shall see, it is available for more private telephone conversations and other activities that require seclusion.

By way of contrast, the bedroom of the child seems to become more and more of a self contained unit as the child approaches their emancipation. The bedroom in this case becomes a type of embryonic apartment. Thus, the electronic appointment of the child's bedroom takes on various entertainment and functional dimensions that might include the TV, PC and stereo.

Interviewer: The children, do they tell you what you want?

Mother: Yeah, yeah. All the time. Espen, he wants a TV in his room and, . . . you want a TV in your room.

Tine(daughter 12 years old): I really want a PC and a stereo since I can watch TV in the living room. But if Mom and Dad are watching the news, I don't want to watch that and I go into my room to watch another program, for example. (Int. 9 apartment)

The same array of devices is also described by Marte, who has all these devices in her bedroom

Interviewer: Are you able to put things where you want them?

Marte (daughter 16) Not in my room, I have the room for things, but I could have used more space since I have so many things. There is the stereo and the TV and the PC and . . . after awhile there is not much room. (Int. 1 apartment)

The final technologies that might be included in the child's bedroom are the Internet and the telephone. In some cases, access to the Internet was also discussed vis -à-vis the children's bedrooms. However, the access to questionable content and the potential economic consequences of extended use both augured against this development. When considering the telephone, before the adoption of the mobile telephone, many children had a fixed line installed in their rooms.³ Now, however, the prevalence of the mobile telephone means that this device is accessible to the child.

The parents' bedroom, as noted above, has more of a removed character. In the words of one father, "the bedroom is a holy place." While this father wanted the bedroom to be a technology free zone, there was the acceptance of a telephone. Indeed many of the informants reported having a telephone in the parent's bedroom. It allowed one to engage in a "completely private conversation" in the words of one informant.

The television was a more problematic technology in the parent's bedroom. The television was seen by some as being inappropriate in this context. Others, however saw advantages if, for example "when you are sick and, in any case you

³ Statistics from Telenor FoU show that about 11% of teens had their own fixed telephone line in 1998.

can follow along with things.” For others, as in the case of this divorced mother, watching TV in their bedroom had become a part of their evening ritual.

Interviewer: do you use a TV in your bedroom?

Mother: A little when I go to bed

Anne (daughter 14): You do that every night mamma. When I come in your TV is on. (Int. 4 apartment)

In some cases, the parents had a PC in their room. It seems, however, that this was not a desired situation, but rather the pragmatic use of the home in the face of other considerations. The lack of other, more appropriate space was one consideration but also the fact that the parent’s bedroom was neutral space wherein there was also a certain degree of control was also seen as a reason to have the PC and Internet access, in the parent’s room.

Mother: We have actually thought about putting it in our bedroom. So that is the plan that at any rate it will be moved.

Interviewer: Why is that?

Mother: First and foremost I think that it is dumb that it is here (in the dining room), and I don’t want it in either of the girls rooms’. If the one wants to use it and such. Then it is better if it is in our bedroom, so that there are not other children in there and things like that. . . I like to have a little control over it. So that. . . They cannot go into Internet if nobody is home here, without asking. (Int. 11 apartment)

Thus, the bedrooms of the parents and the children have different characters and also different functions in the home.

When looking at the discussion up to now, the major themes have to do with the acceptance of ICTs into the various zones. The PC was problematic in the living room, begrudgingly accepted into some bedrooms and was not even considered as a part of the kitchen. The TV was a matter of course in many living rooms but more problematic in the kitchen and in some, but not all parents’ bedrooms. All of these considerations are turned on their head when considering the bedroom of the child where the space often takes on dimensions of being a nascent apartment as the child approaches the establishment of their own independent life. Now we will look into the differing demands of individuals as they move through the home.

ICT and personal spheres

Up to this point, we have been considering the relatively stable zones of the home. The walls and structure as well as the relatively permanent elements furnishing, lighting etc were the background for the analysis up to this point. Indeed, the analysis has focused on the relatively permanent introduction of ICTs into zones that already carry a strong sense of their form. Now we will move to the more transitory personal spheres. These are more fleeting in that the individual changes and adjusts these as they move through the home and there can even be conflict over their orchestration. There is also a type of progression in many of the comments wherein the transitory needs of the individuals become more and more crystallized in the furnishings of the homes. Thus there is a type of progression from an individual need towards a somewhat fixed portion of a zone.

One might think of a type of “sphere of influence” or zone of interaction in the way Hall (1996) describes these. Rather than being a geo-political sphere, this type of interaction obviously takes place on a micro social scale within the home. We conceive of this as a type of aura that surrounds the individual.

The size and extent of this shifts and changes as the individual moves about in the home and pursue their interests. The different members of the household also have their bases of operations, such as the bedroom of the teen, the workrooms of the parents, and so on. In addition, there are more common areas and common resources where there can be mutual agreement as to the type of activity, or in other cases, a type of cold war. In addition, there is also often the need for private spaces where one can draw back and, for example chat on the phone with friends or take care of personal needs.

The concrete consequence of these spheres vis-à-vis ICTs seems to be that they are purchased and placed about the home in order to accommodate various tastes, interests and needs. In the words of one father, “We will have the possibility to be in our own place and not disturb or bother the others.” (Int. 12 Townhouse). A mother brings up some of the same points and also discusses the role of a mobile technology and her personal sphere when she describes her use of a cordless telephone.

Mother: [I use the cordless telephone] mostly here and out on the terrace, I smoke on the terrace. So, sometimes I take it with me out there. . . So you take it with you and then you have a good reason to smoke, even though I don’t smoke that much. (Int. 11 apartment)

In a tangible way, she uses technology to move her sphere of activity to another portion of the home. Thus, she gains privacy for her telephone call and the freedom to smoke.

There is a lot of discussion in the material regarding the purchase of technology so that all can choose the type of media determined by their own whims. TV is a common point here, in that several TVs allow each to follow their own programs and the like. The father cited above goes to the same point when he discusses the use of ICTs.

Father: I see that we have different needs and different desires and that means that it is impossible to only have one, you know only one TV. That is not enough anymore. We need more so that more can take care of their wishes and needs in relation to watching things. So that will come little by little. (Int. 12 Townhouse)

There are two things here. The first is the generational dimension to this discussion and the second is the transition from individual needs to more fixed elements in the home. Looking at the generational issue first, the TV, audio and telephonic spheres of the teens are quite different from those of their parents. Indeed, the purchase of extra TVs, stereos and other ICTs are often justified by this type of incompatibility, as we shall see. In addition, the teens often begin to build up their own, separate existence within the home. As discussed above, their bedroom becomes a combination living room/bedroom. In this case, the physical zone and the sphere of influence can be synonymous. Certainly, there can be conflicts as to how much other members of the family can use that portion of the home. Looking at the second element, the father expresses the need to translate individual needs into fixed elements within the home. This theme comes up again below.

This section generally outlines the various ways in which the activities of household members require coordination and acceptance of other's needs. We will discuss various aspects of the technical, audio and preferential spheres within the home and consider the generational issues associated with this issue. The following section, about rules, is the formal, codified, code of rules used to manage the interaction.

Dimensions of individual's spheres of activity

Technology allowing for mutual existence

The interview material indicates that technology is often used in order to segregate activities and conflicting demands in the home. The TV is often cited as the center of conflicts in the home. The desire to assert one's will and thereby control the selection of programming often is behind the purchase of multiple devices. A divorced mother who shared her apartment with two teenaged girls said "They have [each] gotten TVs since I have experienced that there are so many conflicts with only one TV." This theme of conflicting spheres of influence resulting in the pressure for adjustments in the furnishings of the home was seen in many of the interviews, for example the solution to incongruent viewing interests is the purchase of several devices.⁴

To put this into the context of the spheres, the variation in the needs of the various individuals were not always compatible. One's assertion of programming choice clashed with that of others. The incompatibility in the perceived needs of the individuals was resolved by multiple devices, that is the adjustment of the furnishings of various zones.

The assembly and movement of spheres

The respondents were not only willing to move between the various locations themselves, but also to move equipment about in order to satisfy their individual needs.

Mother: The reason that we have a TV in his room is that we don't always want to see the same programs and we don't always want to have a TV in the living room so that is a type of steering. [He] can go down into his room and watch. But sometimes I have taken it away because there is too much watching. It is a little portable and so I can just take out the plug and put it away. Sometimes it has been put away because one becomes so fixated. [He] can do other things. (Int. 7, townhouse)

Here the mother did not see the TV as a fixed and immobile device, rather it was something that could be regulated and removed as needed. She removed the TV all together when she felt that there had been too much use. The same approach to mobility can be seen in the following sequence.

Interviewer: Have you had a TV in your room a long time?

Marte (daughter 16): Yeah, awhile, since I was in 6th grade. . No before that.

Interviewer: Maybe five years?

Marte: Yeah, maybe longer. . . . Then I got a video a couple of years ago.

Mother: Yeah, because you started to carry that one in there and that I saw "no" because it was so expensive, I thought, I was afraid. So then she thought that she should get a cheap one because she had visits from friends and they wanted to watch films and things like that sometimes. . . . (Int. 1 apartment)

Here again, one sees the movement of equipment to suit a transitory need. The video is used for social entertainment with friends. The mother's concern over her daughter's use of the expensive family video machine led to a more permanent readjustment in the furnishing of the daughter's room as seen in the purchase of a separate video device.

In the cases up to this point, the speakers showed certain flexibility. However, the competition for access to various ICT can result in dramatic thoughts and strategies.

Interviewer: Do you have any conflicting needs or like that needs or desires to use technology conflict with each other?

Father: Yeah, there are. There are, who is going to use the play station and who is going . . .

Jens (son 14): PC. . . The Play station is mine. I can throw out the others if I want to.

⁴ Indeed, statistics from Statistics Norway indicate that about 45% of households in Norway have more than one television.

Father: Yeah, but that is a conflict then. So you have to use force to resolve it. But the PC and who will use that, one wants a game and another wants another game so there is a little arguing.

There are so many things to do, there are two TVs and the PC and the Mac down there. . . (Int. 13, house)

On the one hand, the son asserts a gambit in relation to his Play station. At the same time, the parents can tick off several different ICTs in the home that all can use and so it minimizes the conflicts in that each has its zone and its sphere so that the alternative interests do not necessarily need to conflict with each other.

The interview material also included examples where it was not possible to change between devices. In these cases, other means were used to resolve the conflicts.

Interviewer: How do you resolve it? What do you watch?

Tine: When Mom and Dad and home they turn off the TV and then we agree afterwards or they just decide, like since we have seen so much McGyver and such that we will watch that program, like. Because we have seen just about all the episodes. So it is boring to watch it over and over again when you can watch something new. (Int. 9, Apartment)

The fact that there is only one TV and three different sets of demands, the control of the remote control has become the central point in the determination of what is seen. The extensive comments here indicate that it is an ongoing discussion

Interviewer: Do you watch the same things all the time or are there conflicts about what to watch?

Line (daughter 14): My sister (9 years) and I argue a lot especially when Mom and Dad are at work, then it is like we bicker. If she is done with her lessons and I am done then we sit down here and she wants to watch something and I want to watch something else. We never agree, like. It ends up that we have to turn off the TV and each go to our rooms. (Int. 11 apartment)

The economic and architectural situation means that they must make choices and cannot each have their own choice

Audio spheres

In addition to the visual elements already described above, one can understand the idea of personal spheres in relation to the use of music and other types of audible activities in the home. When the activities are unavoidable, as seen in, for example, the rumbling of the washing machine or vacuum cleaner are tolerated as contributing to the common good. However, the individual's use of entertainment that involves sound, particularly music is often at the center of a personal sphere, and a point of irritation for those who are unable to enjoy their audible sphere, be it filled with sound or stillness.

The management of audio elements

The need for separate audio spheres leads to various solutions. For those persons who live in houses and who have the space for a basement den, this approach allows for a segregation of the spheres, like an extra living room for an extra TV. Just as the purchase of secondary TV sets can resolve conflicting spheres through the readjustment of the set structure, the childrens' colonization of the basement den is another type of crystallization.

In addition to structural segregation, the respondents also outlined other strategies for isolating themselves from competing audio spheres. In two cases, the audio dimension was managed through the use of headsets such that two activities that potentially will disrupt each other can take place within the same space. And in another home, a smaller apartment the informants reported the same strategy.

Interviewer: Do you listen to music in some form?

Mother: Yeah, I like to it is only that. . . Anne gets so angry when I listen to music and she comes in and turns it off. That is a pain for both Katrine and me because we like to listen to music. And I would like to listen to music I really would. . . . Katrine uses headphones. (Int. 4 apartment)

In these cases the fixed structure of the home was unchanged. That which changed was the audio segregation of the individuals and their spheres of interest.

Privacy

Another type of audio management has to do with telephone conversations. Of the 15 homes, nine had a cordless telephone. The fact that the cordless telephone can be moved around it allows one to seek out that context in which they feel the most comfortable for its use. Thus, it is not the management by dictate or the management by negotiation as with stereos and other types of sound, but it is management wherein the individual decides where best they can carry out the conversation.

The cordless telephone thus allows one to have conversations that are more private. In addition, it also allows one to avoid conversations where there are high levels of ambient noise. The ability to avoid other activities is also seen in the following sequence:

Interviewer: When you talk on the telephone do you go into your room or do you use it here [in the living room].

Marte (daughter 16): Both places, but usually in my room.

Mother: Is some ways it is practical . . . You are a little bit more alone, because if the TV is on in here and if you sit and talk [on the telephone] that is a little awkward. (Int. 1 apartment)

The second justification for having a cordless telephone included the idea that "You don't always want to share everything with the rest of the family." This theme came up in several of the interviews and is a particular issue in homes with teens. There is a growing interest in social interaction during the teen years. In addition, unlike their parents who can plan the day during breakfast, the teens often need to organize their social life remotely. Finally, the "home turf" of the teen, that portion of the home where they have the greatest sovereignty is their bedroom. Consequently, it is not surprising that they prefer to use a cordless telephone in this somewhat closed portion of the home.⁵

Thus, for the children the cordless telephone allowed them the opportunity to carry out their social networking outside the purview of others in the home. The sequence above also brings out another aspect of the cordless telephone in that the device allows the mother to approach her use of the telephone in a different way. She mentions using the cordless telephone in the kitchen where the interview took place and in her bedroom. While not necessarily enhancing the privacy of her conversations, the device enhances her comfort by allowing her to be nomadic within the home.

Adolescent spheres

Another issue that arises from the data is the generational aspect of individual needs within the home. This, in turn has impact on how the home is furnished and who has access to which technologies. There seem to be two themes that come through in the data here. The first is that of the general estrangement of teens and their parents. ICTs play on this theme in that their placement allows for parallel activities.

Mother: These teens don't always want to sit together with the parents so they, if it is the TV they leave behind or other things it is not easy to know. But at any rate, they draw back. I understand that. (Int. 5, house)

The mothers talk about how teens want their own space. The placement of the technology in their home allows for a type of gentle emancipation, in that they can each have their own sphere and still be within the same household. Thus, the technology allows for buffers between them while retaining a general boundary. The same separation is also described in the following citation.

Father: When the kids have a visit of the other children, then they go down there to watch. Today, for example, then Øyvind (son 11) had a visit of his friends to watch a soccer game. Then they sit down there, they don't sit up here. (Int. 2, house)

The common element in these two examples is that there the families lived in detached homes. Generally, this means that they had more space available and the generational differences did not need to compete for the same space.

In summary then, the ability to create and manage individual spheres in the home is often based on access to technology and the physical space in which to use these items. In some cases this is difficult and so, as we will explore below, there is the need for rules.

Rules and access restriction

Up to this point we have described the management of technology in the home via the physical structuring of the various rooms and in addition the management of one's personal spheres as they move about the various zones of the home. Another issue associated with the management of technology within the home is the creation and application of rules governing the use of technology. The material indicates that when there are conflicts as to the use of ICT the parents feel free to impose rules. Conflicts can be those associated with too much use, those with conflicting spheres of interest or those associated with access to various types of ICTs.

Rules for the use of technologies already in the home

At the most basic level, the material indicates that there are misunderstandings as to the existence of rules. These discussions can take on a type of existential tone.

Anne (daughter 14): We don't have rules Mom.

Mother: Yes we do.

Bente: If we have rules then we have to follow them and we don't do that.

Mother: Yeah, but at any rate we have rules and of course you follow them. (Int. 4 apartment)

Beyond discussions regarding the existence of rules, the informants spoke about four general categories of regulations regarding the use of technologies in the home. These included 1) time based rules, 2) rules regarding the intrusion of one's entertainment sphere into that of others, 3) rules controlling the economic elements of media access and finally 4) rules that tried to enforce a more general abstinence regarding media.

⁵ The mobile telephone fulfills many of the same functions but often has the disadvantage of that the teen must pay for the use. The cordless phone is often free but its radius is only several hundred meters from the home's base station.

Looking at the time based rules, it was common to hear that the parents limited, or tried to limit, their children's use of time. Parents' noted, for example, that "they can not watch TV before 6:00" or that "I try to keep it an average of two or three hours [per day]." There was also a maturation element in these time-based rules.

In other cases, there is the intrusion of one's sphere of activity into that of others. The question was perhaps intended to play on the role of time but instead it came into the role of sound volume. The child brought this up spontaneously and interrupted his father to answer so it indicates that the issue is perhaps a source of disagreement within the home.

Interviewer: Are their rules regarding use?

Father: No we don't have any real rules for that, well . .

Jens (son 14): I can't play [music] too loud. . .

Father: you cannot play so loud that it bothers others. (Int. 13, house)

The third type of rules governed the economic consequences of access. These rules applied to the use of the Internet and the telephone, that is the two technologies with metered access. In some homes the children were only allowed to use the Internet after the telephone rates had gone down in the afternoon. In other cases, the children were given a "five minute warning" for Internet use when it was felt that they had been on line too much. Again, these limits were useful in theory but difficult to manage in practice.

Like the Internet, the use of the telephone was also a moment for comment in the homes, particularly when the parents thought that it was being misused.

The final type of regulation of technologies in the home was based on a more abstract aversion to technologies. In two cases, the informants outlined the idea of having media free evenings in the home. In the first case, this was seen as more of a romanticized idea associated with the informant's youth.

Father: It is clear that you could have media free evenings. Turned off the TV and had something or just be social, sit and talk together like they used to do when I was a kid. The whole society could benefit from that actually, having completely TV-free evenings and just tried to look after each other and be together. You know, sit there and do crossword puzzles together, played something, done something together. That could be good. I think that the TV and those other media are more of our everyday life than is good. (Int. 10, house).

In the second case, the mother had actually carried through this initiative, to the chagrin of the others in the home.

We have a TV free day each week. With protests. . . I have tried to bring it back, I have tried for a year to have a TV free day, it is every Thursday, and then we sat there and enjoyed ourselves (koste oss) and played games and talked instead. All four had to do it. But then there were so many protests and then there was a soccer game that day and then there was no more free day. I have tried to get it going again, but it is very difficult because there is always something they want to watch right on that day. But I try to limit TV viewing. (Int. 7, Mother, town-house)

The citation is interesting when seen in contrast to the discussion above wherein the family tried to have cozy⁶ evenings by having the TV and the PC collocated in the living room. By contrast, the speaker here asserts that coziness is the opposite of ICT use. This is the opposite of the family cited above who attempted to integrate technology and coziness. Indeed, the mother quoted here was quite active in her efforts to control the families' use of technology. Indeed, she reported being quite active in her strategies to limit ICT use.

Mother: . . . It is not easy to get you away from there [in front of the TV]. I have to call several times. . . I have even had to turn off the main fuse for the house.

Mads (son 14): One time.

Mother: I have done it two or three times. Then you are angry with me but I don't have the patience to call him any more, I don't have the patience. There has also been a week without the PC, a week without the TV, when they don't listen to me. (emphasis added) (Int. 7, town-house)

The mother here is quite militant in terms of her fight against ICTs. This is in connection to the mother's production of food for the family. They are so concerned with the use of IT that they do not come for dinner. In other material it has been reported that parents limit outgoing telephone calls by selecting a subscription that allows only incoming calls (Author I 1998). This is similar to the strategy of the mother cited here, that is the physical disruption or elimination of a technology as a way to limit access. In the next section, we will look into limitation through restricting access to the technologies.

Rules for the physical access to technologies

Beyond simple verbal rules as seen above, there is sometimes the assertion of rules regarding physical access to the technology. We have already had a taste of this approach in the final sequence reproduced above where the mother embargoed the PC and the TV. The material provides us with other variations of this strategy.

Mother: We have had. . . for several years we had a little portable TV in his room

⁶ In Norwegian the words *kos* and *hygge* have roughly the same meaning. *Hygge* is the variant used by the traditional speakers of the *bokmål* dialect while *kos* is the variant used more by in the *nynorsk* dialect group.

Morten (son 16): I had it in my room, my brother too.

Mother: And your brother had one.

Interviewer: So there were three TVs?

Mother: No two. We thought that it was ok . . . That was ok, like. And then it was such that when they sat there and did their homework they watched TV. And so we decided just to take it away. (Int. 3 apartment)

The parents removed the TV when it began to clash with homework. Thus, in addition to the management strategies such as placement, timed access etc, there is also physical removal.

Beyond removing existing technologies, another management technique is to not purchase the device in the first place. This can be justified via either lack of money, lack of place or lack of need. The rule, or the resolution to not purchase a technology, however, may be a moment for conflict in itself.

Father: Most of the people that live around here have a satellite dish. You see them everywhere.

Jens (son 14): Except us . . .

Mother: We don't have one because of the kids.

Jens: Yeah, but we. . .

Mother: Because you all are so, you love to watch TV.

Jens: I don't watch more TV if I . . .

Mother/Father: Yes you do.

Jens: I don't have the time to watch TV.

Mother: And another thing there is so much shit on TV, there is so much shit. It is nothing to watch. Violence and destruction.

Jens: You are like your . . .

Mother: Yeah, I am like . . .

Jens: You are like . . .

Father: Pokemon, is that it? It is really dangerous to watch. Weren't there seven hundred Japanese children that had to go to the hospital after one episode? It was stopped in Japan. (Int. 13, house)

Here is the limitation of access via the refusal to purchase a device. The structuring of the discussion here is interesting. The mother and the father have their “party line” that does not allow the purchase of the satellite dish. At the same time, Jens has a set of arguments that he tries to assert. He is able to bring up a couple of issues, but eventually as the sequence develops, he is not able to get the floor. Finally, the father caps the discussion with an example of just how destructive the television is as seen in the citation of the example from Japan.

This is a good example of an ideological disagreement. Not only does each party have its basic position, but also the ongoing nature of the disagreement means that each party must continue to collect new arguments, and also new examples to illustrate existing arguments and to maintain their ideology. One can see this in the parent's assertion that TV is violent. Early in the citation, the mother makes a more general statement that they do not want the satellite dish because of the children. Perhaps prompted by Jens' response she goes to a slightly more specific argument that there is “so much shit on TV, there is so much shit. It is nothing to watch. Violence and destruction.” Again, Jens rises to the argument again; the father brings up the trump card of a specific example of how destructive the TV is.

One sees the integrated ideology of the parents, one sees the counter ideology of the child, albeit less well developed, and one sees the movement from the general to the specific in the assertion of the arguments.

To round off this section, we have seen that the families used rules to either manage technologies that were already in the home, or to control the acquisition of new ICTs. As we have seen, the rules can either have practical aspects such as who gets to use which technology when, or they can be founded in ideological considerations as seen in the morality of television.

Conclusion: ICT and the management of family life

At the outset of the paper we examined the way in which technologies are domesticated or institutionalized within the home. The material from our work shows that this is a problematic issue. It is something to be managed. Beyond simply being purchased ICTs need to be displayed in an appropriate way in the appropriate zone of the home, incorporated in the families routines (routines that are dynamic as the family goes from life phase to life phase), and also converted into symbols of the families status and identity.

The notion that ICT is an item to be domesticated implies that at the outset, it is indeterminate. That is, its role in the home is not always as expected. The technology can effect the various physical zones and personal spheres in unex-

pected ways. Their inclusion in the home may result in the development of rules for use. In all of this one might purchase technologies with the purpose of uniting the family only to find that they have the opposite effect. Thus, these artifacts play into the moral economy of the family. In this concluding section we will look into this dimension.

Technology as a divisive element

Following on the heels of the previous discussion, we will first look at the ways in which technologies can be divisive within the home. As seen above, the refusal to purchase a certain type of equipment provoked disagreement within the family.

The decision not to have a technology splits the family. This refusal seems to be a form of irritation for the family that is divisive. In the same interview, one also finds an example of the conflict-ridden use of existing technologies.

Father: When you are up there to watch another program or if you want to play with your Play station while the others want to watch the news, that is divisive.

Jens (son 14): I don't want to watch such boring programs anyway. (Int. 13, house)

Here one sees division on a more moral level. Another issue is the physical division of people. One sees this theme in the following sequence.

Mother: People have different taste, and there are different things in the house so we can all have our own thing in a way. Before it was such that we all sat together.

Interviewer: Is technology a thing that divides you?

Mother: No it does not bring us together, I don't think so. More the opposite.

(Int. 4 apartment)

In one way, the divisiveness of the technology was seen as being destructive. Others, however, asserted the opposite. For example, the placement of the TV in various rooms was a way to manage the use of the technology and the social interaction within the household. In just the same way as the one family had all the technology in the living room in order to enforce unity; the situation discussed in the sequence below shows how the TV is put into other parts of the home in order to develop the living room as a reserve away from the influence of the TV.

Interviewer: Does technology collect you or divide you?

Mother: It actually separates us a little bit, but I think that is an advantage because it is so easy to argue with two teens in the house because they argue a little.

Interviewer: is it about media use, about what they will watch and that type of thing?

Katrine (daughter 15): Yeah, she turns off the music and then she will decide what I can watch on TV.

Anne (daughter 14) I don't do that!

Interviewer: Is that the reason that all three of you have a TV? Does that help?

Mother: It helps th at they sit alone. (Emphasis added) (Int. 4 apartment)

Technology that physically splits the family allows them to retain civility in other areas of interaction.

ICT as an element in the management of family unity

Ending on a final optimistic note, in this final section of the paper we will look at how technology promotes togetherness within the home. The material provides insight into how ICTs are used to attract household members to quasi-desirable social events, how technology is used as a collecting point and finally examine the TV as a social center.

In the immediately previous section, we discussed the way in which technology allowed individuals in the home to segregate themselves and thus to avoid disagreements. The material provides an example of another use of technology, that is its more cynical use to promote togetherness where the social center will not hold. One can see this in the following sequence.

Mother: We have been very interested in having a TV in the dining room to keep people there when they should eat, especially the kids. They have a tendency to take food and sit in front of the TV. So I thought about that sometimes. It could be good since then we would be at the table all together, but I don't know that it is possible.

Father: It is not acceptable in relation to me.

Mother: Yeah.

Father: So you can say that there is a disagreement. (Int. 14 House)

The sequence shows that the mother considers playing on an already established pattern in order to maintain the family during eating. A similar though is seen in the following sequence.

Birte (daughter 16): We have a satellite dish at the cabin (hytte).

Interviewer: Yeah, but you have chosen to have it at the cabin?

Father: Yeah, it . . . but that was because we cannot get reception with a regular antenna, not even NRK. It is impossible, poor coverage.

Mother: We also want to have the kid with us at the cabin.

Father: Yeah, that also because . . . Yeah, you need a carrot occasionally. (Int. 15, house)

Again, here is the use of technology to manage the family and the situations in which they are together. The TV at the cottage is used to entice them. Thus, the parents get to be at the cottage and the children get to see their TV. This is not the management of the technology but it is the use of technology to manage the inner social life of the family.

The use of technology to collect the family was also discussed in through renting of videos for family evenings, or habitually view the news together. Others pursue technologies that are more ambitious and use them both as hobbies and locations for social gatherings.

Father: I am done with the basement den underneath here and I have a surround sound system there you know.

Interviewer: So it is almost like a cinema?

Father: It is a cinema plus a music system also.

Interviewer: Is this a type of hobby or because it is better to watch some TV programs,

Father: Both . . . among other things, we were together with the neighbor and saw the Grand Prix. And that was a completely different way to see the Grand Prix when you have that type of system in relation to watching it on a normal TV because you get in all the effects. And when you rent a film you know, there are all the effects. (Int. 5, house)

The family used technology as a way to co-locate themselves and thus, encourage social interaction. This, of course, echoes the approach taken by the family cited above who chose to locate the PC in the living room in order to have cozy evenings together. This is, perhaps the ultimate in terms of using technology to encourage togetherness.

Conclusion

In this paper we have examined the management of ICT in the home. We have found, for example, that the PC is not seen as a legitimate element in the living room nor is the TV generally accepted in the kitchen. Looking at a slightly higher level of abstraction, the discussion of these elements in the home illustrates the process of domestication. That is, it brings up the way in which new technologies challenge existing ideas as to how one's home should be.

The material indicated that there were distinct physical zones in the home, such as the ceremonial, functional and the private. These were furnished with the intention of, for example, entertaining guests, or carrying out the functional activities associated with the maintenance of the family. Thus the introduction of new ICTs into a preexisting context did not always come easily. It could mean that existing patterns and notions as to how, for example, a living room should be used, were put into question.

Individual use, as expressed in the idea of personal spheres is also seen in the material. These are far more temporal than the physical zones since they change and shift as one person enters or leaves a particular zone. All of this the individuals need to manage their activities in relation to the others in the home. It here that rules come into play.

Family ideology is a type of super structure that guides these elements. It is interesting to note that this was often well articulated in the material. Informants could often easily put words on the things that guided their decisions regarding interior decoration and the placement of objects in the home. This indicates that these ideologies were not the ownership of the individual but rather were the common property of the family as a whole. This is not to say that the ideologies were universally accepted in the home. As we have seen, there could be sharp differences in the individual members' feelings regarding the ownership and use of ICTs. None-the-less, the ideologies were easily accessible and often in active use.

The increasing individualization of ICT in the home along with the increasing mobility of the technology means that the, more or less, frozen structure of the home is being challenged in new ways to accommodate these activities.

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