Re-mapping the Cash Flow: Audiovisual Media and Corporate Communication (1954)

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I. Introduction

The purpose of my project is to analyse how audio-visual media has been embedded in the geographical and often intangible flows of information and money since the 1950s. This paper is the first, in a series of studies, concerning the networks of production and distribution of audio-visual knowledge in Sweden during the 1950s.

Background

The three-part socio-economical system that was developed in Sweden at the beginning of World War II, "The Swedish model", presupposed that employers and labour unions solved as much as possible themselves. The state provided the infrastructure and, which would become more apparent later, a strong control through legislation (Freeman et.al. 1997). The 1950s in Sweden saw a rapid development towards a more controlling state apparatus: public spending increased, taxes were increased, the social welfare system developed rapidly, but also, the state increased the control over information, especially print and broadcast media (Wirén 1966; Hadenius 1998) and knowledge, education and research (Nilsson 1994). In an era discovering visual media as tools for information on "invisible" or intangible assets, film become more important than ever before. The struggle over television was not only a matter of commercial or public service television; it was a struggle over the system of organising knowledge and information.

During the first half of the 1950s this struggle between state (governed by the social democratic party) and industry was even. At the end of the decade the state won its first victory by prohibiting commercial television. In the early sixties the state took one further step with a state support system for film production. Commercial, non-theatrical, moving images did not directly go underground, but they had to leave the public sphere. Commercial film production would remain larger than the state financed film production; maybe they even had a larger audience (at the workplaces and adult learning institutions). Commercial moving images did not make its entrance into the public sphere until mid 1980s, through commercial television, and thereby contributed to attitudes towards commercial audio-visual media during the 1990s.

For almost 30 years, Swedish people had seen public and commercial media as two separate entities. With digital media they met, or rather, clashed. And since neither public service television nor private newspapers understood the logic of commercial audio-visual media, the public knowledge of the IT sector at the end of the 1990s and beginning of the 2000s was heavily distorted. All restraints from the 1950s was gone, there was an increased private, commercial and public loaning, a dramatic increase in individuals ownership of stocks and funds and a very active stock market, where new IT companies needed huge amounts of money. This developed into a rapid increase in stock values, and a situation when millions of people had most of their savings depended on the continued growth of the stock market – but with little or no

transparency when it came to flow of money and information. When it became apparent that the money flow was faster than the flow of information, everything changed. There were no more investments. Stocks were suddenly worth 20 or 10 or 2% of what they were worth 6 months earlier.

I am not saying that the decisions of the 1950s caused the crash of 2000, or that better knowledge of the 1950s would have stopped it from happening. But I will argue that with all its flaws and shortcomings, the discourses on knowledge, information and technology of the 1950s Swedish business and industry indicated an audio-visual economic 'literacy', and a notion of the importance and use of transparent flows of information and money. For 30 years public service radio and television had described these flows as a subversive strategy of capitalism against a democratic society. What was lost was that the knowledge of audio-visual economic information became accessible for only a few. Professional knowledge of audio-visual media was confined to the workplace. But even at the workplace this knowledge was only accessible for experts and managers, since the trade unions would dominate the audio-visual means of learning for the workers from the 1960s until the 1980s. If this will prove to be a correct description of what happened, it would mean that public service television and a publicly controlled educational system, including most of the vocational training, caused an increased gap in knowledge of how media works. In a society with a shrinking public sector, media no longer covered, or "translated", the real flows of money and information.

When national public service television started (officially) in 1956 and all other forms of television was forbidden, public discourse entered a view of society from the viewpoint of a unified nation (socially, culturally, economically and geographically). An oligopolistic film distribution system even further emphasised the lack of local or regional differences in audio-visual media. What remained local or regional was the business and industry film and video sector. To some extent this development reflected a tendency towards a more 'nationalised' economy. Both the employers associations and the trade unions had by the late 1950s been more and more centralised. Industrial politics supported big business leading to major differences in the conditions for small-scale and large-scale enterprises. Both feature film and television were themselves large-scale enterprises, the former private (but from 1963 to a large degree state supported), the latter public (controlled by the state).

There is much to be said about what this meant for the representation of local economy and culture (forthcoming papers from this project will focus on that). What I will focus on here is how this large-scale view on society and economy, the national economy as a predictable system, was closely linked to the conditions for audio-visual media.

The SNS conference at Tylösand 17-20 May 1954

During 17-20 May 1954, The Centre for Business and Policy Studies [Studieförbundet Näringsliv och Samhälle] (SNS) arranged a conference for top managers in Swedish industry under the title "Business and industry plan for the future" at the summer resort of Tylösand at the West Coast of Sweden. The conference focused on automation, atomic energy, game theory, operation research, cybernetics, and the social, economic, physiological and psychological consequences of automation (Thorelli 1954a). Automation in production was well established

and had for some decades proved to be important for the development of Swedish industry and a key component in the economic progress of Swedish post-war society. Atomic energy was new and in political discourses highly controversial due to cold war politics. Both of these broad topics were frequently discussed within Swedish industry as well as in public debate. What makes the Tylösand conference interesting is the way it embedded new ideas in technology and business within broader discourses on the role of economic, social and cultural progress in 1950s Sweden.

Game theory was introduced as a strategic tool for business behaviour, especially in what was described as "oligopolistic competition", where mutual consideration is necessary (Faxén in Thorelli 1954a, 54). Operation research was discussed as a less theoretical and already established method for formulating goals and methods for analysing processes results, as well as measuring how a company could best respond to external changes and solve internal problems. An interesting distinction between game theory and operation research is being done: operation research is a one-person game, the opponent's choice of strategy is not regarded as opposing one's own (Hansson in Thorelli 1954a, 55). Operation research is seen as an applied science without considering "tradition, moral, politics etc", which are left for policy-making bodies, "common sense in mathematical forms" [sunt förnuft klätt i matematisk form] (Hansson i Thorelli 1954a, 56f).

Game theory, presented as "theoretical" and focused on human behaviour, based in technological advances during World War II was contrasted with the more de-humanised and formal, but less mathematically sophisticated, methods of operation research, based on common sense and long-range industrial development. This merger between scientific sophistication and interest in human behaviour was a popular topic in both public debate and research.

The ideas of cybernetics presented at the conference, which were based on Norbert Wiener, whose *Human Use of Human Beings* was translated into Swedish in 1952, are even further situated in the present. Tendencies to identify and analyse totalities and systems were frequent at the time, in psychology, sociology, economics etc. Expressions like "patterns of behaviour" [beteendemönster] had became more and more common in public debate (Kjellberg in Thorelli 1954a, 58f).

In a discussion on cybernetics a distinction was made between transmission of energy and transmission of signals (or signals as energy within a structure). Power plants, power transmission lines, trains, boats, aeroplanes and nuclear bombs are mentioned as examples of transmission or transformation of matter and energy, or "power engineering" (Eng. in original). Radio, telephone, photography, film, television and "mathematical machines" (that is, computers) represent transmission, or transformations, of signals, "communication engineering" (Eng. in original) or "informationsteknik" (literally: information technology). It is mentioned that contemporary with Wieners book was Claude Shannon's *The Mathematical Theory of Communication* (Kjellberg in Thorelli 1954a, 60f) and put together they became representatives for an emphasis on selection and feedback. Even if the uses of cybernetics was at the time uncertain, it was concluded that cybernetics was as most important in providing contacts between different fields of knowledge and thereby contribute to a better merger of human knowledge (Kjellberg in Thorelli 1954a, 62)

Contact was the first, and most important, of the three key concepts in the discussions on information, technology and business at the Tylösand conference. The other two were scale and feedback. The issue on scale concerned for example how big a series was required for a production should be for a successful automation: was it possible for small markets like the Swedish to afford automation. Some argued that the scale of production was important (Gårdlund in Thorelli 1954b, 14f), others that the scale of information and knowledge were more important, that is, financing, research and patent strategies were more important than the amount of units produced (Edwards in Thorelli 1954b, 21f).

One limiting factor was mentioned, the lack of financial resources. In Sweden during the 1950s the private savings were quite low, direct ownership of shares was almost negligible, the share market was a weak tool for venture capital. The post-war financial politics had made it more difficult for commercial banks to invest in industrial development, partly because of low private saving and unsecured and therefore expensive and consequently not very attractive commercial savings. Even legislative restraints made it more difficult for banks to make money available for large investments in new technology. This would influence the arguments for television a few years later. The taxation of companies had also changed since the 1920s and 1930s, which made it difficult for companies to make tax deductions for investments in new technology. On the other hand, public investments were higher than ever before. Public consumption had increased from 14% of the national revenue in 1939 to 25% in 1953 (Thunholm in Thunelli 1954b, 28ff). The issue of how to finance the industrial changes during the 1950s would be key for the further discussions on information and knowledge as instruments for economic development.

The Tylösand conference was perhaps the first time that ideas of information theory and information technologies were discussed in Sweden, outside scientific or technological research groups. In the many different management, education and organisation conferences that would follow the coming 5 or 6 years these issues were almost always the implied preconditions and the basis for any analysis of the problems and methods on how to develop Swedish industry: (1) the question of the diffusion and transformation of knowledge, information and communication and (2) the question of financing. Or, in other words, how information works in an economic system governed by an increased demand for rationalisation, and a growing public sector trying to control information as well as financial resources.

The weapon was transparent flows – of information and money. This resulted in an increased interest in pedagogy, advertising and public relations with methods that increased transparency, or at least, made it look like it was transparent. The latter because what were being transparent were often things otherwise not visible, but that had to be made visible. It was not a tendency to reveal matters that had previously been hidden, but to visualise abstract processes needed for a better understanding of the new economy.

The idea of systems and patterns were not confined to the industrial sphere. It was already part of state politics. What differed was the role of media. The state "cybernetics" did not include visualising small-scale flows, only large-scale flow of information and money; that is, only the flow of public money and large-scale private enterprises became visible. This also resulted in what could be called a lack of sense of place. The national perspective in public service programming seem to have created an "overcoming of distance" in the same way as education and state politics promoted an overcoming of distances between classes. Commercial audio-

visual media were excluded from these discourses since their "localities" were too obvious – business and industry. The major changes in industry location during the 1960s and 1970s, with large-scale relocations of people and business as consequences, became only explained from the viewpoint of state intervention and large-scale industrial decisions, rarely from the perspective of small-scale industry or small-scale distribution of information and knowledge.

II. Networks of information

Industrial changes

There was a general tendency towards a focus on industry branches and branch organisations, and a moving away from regional networks, already at the turn of the century 1900. (Glete 1987, 109). The foundation of the Grängesberg Company in 1896, a merger of a group of Swedish and foreign companies, in itself one of the largest industrial mergers in Sweden at the time, initiated a large trade in shares and gave rise to renewed activities at the Swedish stock exchange. A considerable part of the trade was due to the Grängesbergs shares, the so-called 'grängesbergare'. (Glete 1987, 113) Before the depression 1920-23, Swedish industry had consolidated around the two major banks, Svenska Handelsbanken (founded 1871 in Stockholm) and Skandinaviska Kredit AB (founded in 1864 in Göteborg) and the Wallenberg Group centred around the Stockholms Enskilda Bank (founded in Stockholm 1856) and the investment company Investor (founded 1916 in Stockholm).

The crisis of the early 1920s, interestingly, saw an increased interest in information, which among other thins resulted in a boom for industrial film. Maybe the increasing importance of, or interests in, financial capital promoted an engagement in a medialisation of economic information, or it may have been the major flows of all sorts of capital that promoted engagement in medialised information. Or, as a third hypothesis, it was the discourses of capital flows that promoted mediated economic (financial or industrial) information. The drastic changes of 1920s concerned increased financial discourses and increased industrial rationalisation. A large production of industrial films emphasising a move away from regional networks, privileging financial capital and ownership (not outspoken in films) and its national importance (clearly stated) and showing value-adding material construction - thereby focusing on the visual (Björkin 1999). The financially speaking insecure situation seem to have put emphasis on natural resources, value-keeping, connections between place and value-keeping, national wealth and a sense that information was separated from the natural resources.

The end of World War II and the beginning of the Cold War resulted in another set of drastic changes for the Swedish industry in the 1950s. Again there were increased financial discourses, the rationalisation was now focused on the office, and the industrial films emphasised a move away from determining localisation, privileging co-operation between technology and space/place as fundamentals for growth. The films, as well as other media, tend to focus on a move away from an old space-bound economy (geoeconomics/geopolitics) towards a new space-bound economy where technology works for overcoming distances. The financially insecure situation this time put the emphasis on processes, especially value-adding processes, and their connection to geographical location transforming the nation into a wealth-promoting economic, industrial and financial network (industry), in constant conflict to a political allocation of

national wealth (social democratic state policy). Information was seen as a process and inseparable from the resources. Industry discourse saw growth as a result of information and capital, while the Social Democracy tried to control capital and information to get growth for increased public consumption.

New Accounting Practices

The renewed interest in the relation between information and capital required new ways of accounting. As in other fields of society even accounting became more inspired by American standards after WW2, replacing a situation with two traditions, one German and one British. In practice the differences at the end of the 1940s and early 1950s seem to be minor. On the other hand, the American tradition of budget and budget accounting was introduced in Sweden by way of the so-called M-chart. Budget accounting meant that revenues and costs were budgeted for every cost centre, something that was rarely applied in Sweden during the 1930s. In spite of its German background the M-chart became standard practice after the war. In 1948 at a conference on accounting practices, one of the largest Swedish companies, Svenska Cellulosa AB (SCA) explained that they where using the M-chart, and that it was especially applicable to them, since they used punch card machines for their bookkeeping. The uses of punch cards and the M-chart made it easier for SCA to make a distinction between branches, as sulphite pulp factories, sawmills, paper mills etc, instead of individual companies (Carlsson 2001, 337). As a result they developed a system that was fit to their actual relation to different groups of stakeholders, and I would like to add, it made it easier to communicate. When looking at the SCA communicative practices in the 1950s – films, publications etc – a more branch-oriented perspective is visible, as a result of general trends, but also, most likely, as a result of a better overview of the company's financial situation.

Another company, a middle size iron company, Norrahammars Bruk, introduced the M-chart in 1943-44 and at the same time mechanical bookkeeping (punch cards) by means of a bookkeeping machine. According to the company, the major advantage of a combined use of M-chart and bookkeeping machines was its flexibility, which was good for a company facing big changes. It was also easy to use for people within the company not working with bookkeeping but who needed to understand business reports (Carlsson 2001, 338). This shows that the connection between accounting practices and information strategies during mid 1940s had spread even to middle size companies. It also indicates that economic information had become available for a larger group of employees, that is, middle and lower management. It also indicates an influence from the system of the so-called company committees [företagsnämnder], an employer and employee committee, which was not a decision-making authority but an advisory group for discussing strategic and personnel oriented issues.

The M-chart seems to have been widely accepted by Swedish enterprises during the late 1940s and the 1950s, although in different versions, often tailor-made by the companies themselves (Samuelsson 1990, 84). One thing in common for all of them was the standardised use of the decimal system (although some had used it before the M-chart). The use of the decimal system was primarily determined by practical reasons. In larger companies, that used punch card machines for their accounting system, the technology required decimal systems. Also most of the bookkeeping machines used by smaller companies could only deal with numerical codes (Samuelsson 1990, 85).

It is probably to make too simple to say that the M-chart was an effect of the introduction of punch card machines for accounting purposes. It is not enough to use as evidence the fact that the M-chart lost its position when computerised accounting systems became widespread (Samuelsson 1990, 89). That is not necessarily the case, but further research is needed. So far, we can say that accounting practices and business technology were linked, not directly, but by changing information needs. One of the advantages of the M-chart was that it became possible to include indirect, overhead costs, still "treated within an integrated system of double-entry bookkeeping" (Samuelsson 1990, 95). The M-chart was flexible, and in comparison to earlier systems it gave more information of a kind that had not been requested before, that is, intangible assets were now included in the system of internal and external economic information flows.

When computers were introduced for dealing with accounting systems in mid 1950s, they seem to have been modelled after the punch card system, often with the result that the information given was lower than before (Samuelsson 1990, 105). In the debate the relation between rationalisation, efficiency and information was sometimes confusing, but the initial process is not without relevance. (Unfortunately there is not much research on this area.) For some time the focus was put on the development of technological systems. But before that, that is, the first half of 1950s, the debate still concerned the needs for new information, which earlier systems could not provide. Traditional accounting histories (for example Samuelsson 1990) are thereby missing the key issue – how accounting could be used as information within and about the company. Samuelsson, though, makes an important remark when noting that: "Punched card systems or the first generations of computer systems [...] were designed according to a requirements analysis. After the implementation of the system, it was very difficult to change its content or the presentation of accounting information" (Samuelsson 1990, 156).

This lack of flexibility should not be used as an evidence of technological determinism, rather that the discourse of more rational accounting practices indicates that accounting was embedded in a wider discourse on information and technology, and no longer an internal issues for a few specialists. Accounting became closer linked to other management issues. The company committee system forced companies not only to popularise accounting and financial information, but also to create a new, "total" system for company information.

Changes in management trends

The discussions on contact, scale and feedback at the Tylösand conference are three central discourses, maybe the three most important ones, within business and industry, within the cultural debates, and, indirect, within politics in Sweden during the 1950s. Almost every conference on management issues, focused on how to improve communication within the company. Rationalisations, though, required that communication and contact became medialised by means of films, slides, posters, bulletin boards, flannelboards, meetings, courses, conferences etc. Branch conferences and conferences for managers or experts at specific levels independent of branch were organised in order to create networks of knowledge and information. Mapping these networks results in a different view of the "network economy" of the 1950s, not separated from financial flows, rather indicating nodes of economic development, or at least, sites that were regarded as important for industrial development and economic growth. [I will give examples of this kind of mapping in my presentation.]

From the 1950s perspective, the rhetoric of the "People's Home" [Folkhem] of the 1930s and 1940s, a view of society as a large scale family, became a way of overcoming, or hiding, the material preconditions for what we today mean with a network society. Maybe this is a reason way Swedish social democratic politicians adopted the social dimension of the term during the late 1990s, but not the economic dimension. Economic networks had been regarded as a problem since the 1950s, probably because they easier adopted new technology and thereby, according to the critics at the left, became undemocratic, that is, created new networks that were not controlled from any one, central, authority. Within Swedish industry the struggle between a centralised system of industry and trade organisations and a more "business motivated" system of branch organisations and regional networks, resulted in a split between a national level that was easily disseminated though state media and a local/regional level, that was as mediated but found no use of national media and therefore became visible only for those within these networks. Technologised financial flows diverged from the flows of political discourse. Maybe that is one reason why the battle over media technology became so important during the 1950s.

Changes in location discourses

As already mentioned, at the Tylösand conference the issue of scale was of great importance. Sweden was a small market, with few, if any, multinational companies. On the other hand Sweden is geographically quite large, which meant that issues of location of industry and trade was of great importance. Following that it is not surprising that infrastructure has been a major concern for public and private investments as well as for public debates during the last 150 years (since the introduction of railways and telegraphy). During the 1950s railways, roads, air transportation, telephone and electricity, as well as the financial and legislative infrastructure therefore dominated public economical debate.

During the early industrialisation steel, iron and mining industrial areas were located close to the water ways, that is, by the major lakes with contact to the north sea (Vänern) and the Baltic Sea (Mälaren), the wood and pulp industry along the north east coast, close to the large forests and water power, and textile close to the south east and south west coasts. The major cities Stockholm and Göteborg were dominated by trade. During the 1950s these restraints based on natural resources, sea transportation and waterpower were weakened. Increased transportation by railway and road transportation made it easier to locate industries at other places, which also meant that the question of location became an important political issue. A restructured industry and more flexible location possibilities threatened the demographic stability that had existed during the interwar period. In this highly controversial field, electronic media would become highly contested.

Changes in audio-visual media

Television had been debated since the late 1940s; a state commission had investigated the prerequisites of television (SOU 1954:32). The issue of commercial television, which was supported by the industry and the liberal and conservative parties, was heavily criticised by the left, and by the national radio (which argued for a public service television organised by them) and by the press. Even liberal and rightwing newspapers were against commercial television, because they were afraid of losing their dominant position as advertising media (Wirén 1986;

Hadenius 1998).

In 1958 the Industrial Institute for Economic and Social Research (IUI) [Industriens Utredningsinstitut] made an investigation of the interest in commercial television among the potential advertisers (Gillberg 1959). The result of this study was used by the state television commission as argument against commercial television and by the industry as argument in favour of commercial television. A reason for these diverse interpretations was caused by an intense manipulation of the conditions from the national radio the government and the state authorities for telecommunications (Paulsson and Samuelsson 1954, 3). When analysing this study today, it is difficult to say that it would be anything else than a strong argument for positive economical conditions for commercial television. I will not go deeper into this debate in this paper (it will be presented in another paper). What is important here, is that the argument for a combination of public service and commercial television, with both national and regional networks (both UK and West Germany was used as models), indicates that the industry wanted a television structured more like the structure of the industry itself, with a double focus on "delocalised" branch networks and local and/or regional markets (Haldén 1957, 11).

In September 1956 the state controlled and governed public service television started. With the exception of some complaints of unfair treatment in programs on trade and industry, the discussion on commercial television was transformed into a continuing request (though they obviously were well aware that it would be a long fight for a change) for commercial television. A decade later, at the end of the 1960s this discussion returned when a second channel was introduced, but it was not possible to broadcast commercial television from transmitters in Sweden until 1991 (in 1986 the start of TV3 forced the legislation to accept transmissions through satellite from other countries (UK).

One reason why the industry in a way accepted the defeat so easily was probably that television was not interesting in itself. They soon focused on other media. Their engagement in the TV debate, however, indicates a strong interest in medialised communication. What happened was a renewed interest in an old medium, film, and an increased interest in internal communication. The combination of a public debate with a strong bias against private enterprises and capitalism in general, and the difficulties for them to get access to broadcast media transferred individual firm's interest towards internal communication and transformed the national employers' association (SAF) into a (fairly) unified medium for the industry, focusing on what was possible to communicate through state media and the national printed press, that is, the interests of the larger corporations. In this respect they followed how state media presented the flow of money from a large scale perspective.

III. Networks of audio-visual production

We have seen that what in 1954 was key to the development of the 1950s, was rationalisation of production and administration, rationalisation of information and learning, and better ways of improving contacts between different stakeholders.

In 1952, two years before the Tylösand conference the National Association of Employers initiated the Personnel Administration Council (PA-council) [PA-rådet]. The PA-council was

designed as a promoter of research on human resources (HR) and as a consultant organisation in matters concerning PR (Lahnhagen 1954, 3). Among the areas they covered were communication technology, or as they often called it, tools for contact making [kontaktskapande hjälpmedel]. They soon even started a distribution company for moving images, slide shows and other information and educational media: PA-distribution.

The PA-council edited a catalogue, initially a loose-leaf system, which a large number of member companies subscribed to. The first printed, collected edition came in 1960. In many ways, the growing PA-council film and media catalogue reminded as much of the industry conception of television as of earlier modes of industrial film making. There is a distinct conflict between local/regional and national/branch interests. All the issues from the Tylösand conference are frequent in the catalogue, whether it was films produced by or for Swedish companies, or imported films, or films commissioned by the PA-council itself.

IV. Re-mapping the cash flow

Certainly these films are interesting to study from the point of view of how they represent places, processes, attitudes etc. What I will focus on in my presentation at MIT 2 is rather the strategy of selection and description that is expressed in the catalogue and in the discussions about these films in different industry publications. I will show that through the selection of films and other audio-visual (or only audible or visual) media, in comparison to the production of such material in one large Swedish industrial firm, will give some information on the attitudes towards and use of different media in corporate communication.

The films and slide shows etc. are embedded in larger discourses on technologies of business communication (punch cards, computers etc), aesthetic trends in non-fiction and fiction film making, trends in psychology and sociology as well as on space/location aspects of the time. Seen together the strategies of new accounting practices, location politics, corporate communication and communication technologies, can be expressed through maps as accounting charts – in the1920s they were fixed, material and focusing on visual assets – in the 1950s they were negotiated, rational, mediated, process-oriented, and focusing on visualising invisible and intangible assets. The films and TV made it during the 1950s, the Internet and other digital media do it today. To some degree the problem is the same, how to visualise the flows of money.

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