

The Multimedia News Reporter: Technology and Work Processes

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Abstract: Media companies of different origin are today becoming increasingly similar to each other both in the way they present journalistic information and the type of information they present. This convergence throws special light upon the differences in the ways in which reporters for different media work.

In this report the result of a number of interviews with reporters from various media backgrounds will be presented. Analysis of these interviews shows that there are fundamental differences in working methods and news reporting between the different publishing channels even though they are built upon the same journalistic and ethical base.

1. Introduction

The media companies of today are no longer isolated within a specific field of business, such as radio or television broadcasting, as they often were previously. For a long time, for example, newspaper organisations were occupied only with the distribution of newspapers in print and television companies produced and broadcast only television programmes.

As technology for the distribution of journalistic information in various forms has become more easily available, and with the Internet and the World Wide Web's introduction into companies and households, the tendency has been for the larger media organisations and companies to have several publication forms at their disposal. Both media companies and forms of publication have a tendency to be more and more intimately linked.

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Radio, television and newspapers are now finding themselves in an increasingly hard pressed situation as profit margins diminish and competition increases. There is a belief that in time media companies will have completely altered forms and strategies. Reporters will be covering events with several possible publishing channels in mind. (Bartlett, 1994)

The economic reality, above all for morning newspapers, has become all the more severe and new forms of co-operation and products must be developed if the media companies are to survive. (Rosenqvist, 2000; Lundblad, 2000) This has, in combination with technical developments, led to reduction in staff and changes in working tasks. One aspiration for newspaper management has been that one and the same person should carry out as many working assignments as possible at the same time, in order to rationalise editorial work. (Sabelström, 1999)

As an illustration of part of the change toward a converging media world, a small study has been made, in collaboration with the Swedish morning newspaper *Svenska Dagbladet*, of the differences in working methods of reporters with different media backgrounds. The author has studied the working methods and content of news reporting in different forms of publication in order to discover if there is a lowest common denominator in the journalistic collection of information and presentation of news. The results will provide the basis for a continued discussion and development of editorial work and a concentration on the new forms of publication and publishing channels. (Sabelström 1998)

2. Method

This study may be regarded as the first step toward a possible changing of the working methods and organisation at *Svenska Dagbladet*, and should provide the basis for wider discussions on the newspaper's continued media involvement. It could in time lead to action research, either with independent researchers acting as the driving force or with experts in collaboration with a personnel group, so called Participatory Action Research (PAR), or in the form of internal research run by the editorial staff, known as "researcher-free" action research. (Reason 1994; Westlander, 1999a)

The study has been carried out partly retrospectively through studies of literature, and partly prospectively through qualitative interviews. As this section of the research, designed to facilitate work on changing the newspaper, concerns speaking with people active in various forms of publication and comparing their experiences and conclusions, the author's (researcher's) role has been to qualitatively evaluate and compile their conclusions and pronouncements with the help of the author's own experience and knowledge within the area (Kvale, 1983). In order to

ensure the interviews' validity, the author has had feedback from the interviewed parties.

Information has been collected primarily through interviews with radio, television and newspaper journalists (and their web editorial staffs) and also through an analysis of the content of radio and television news broadcasts and news coverage in newspapers and on the WWW.

The interviews have been semi-structured (Westlander 1999b), and the discussions have been guided by the author. However, the person interviewed has been able to speak freely so that the author's opinions and preconceived ideas have not, to any great extent, coloured the information compiled. Explicit interview replies are not presented in this report so that individual opinions cannot be traced to specific individuals. The analyses that follow are the author's own.

3. New technology for journalistic work

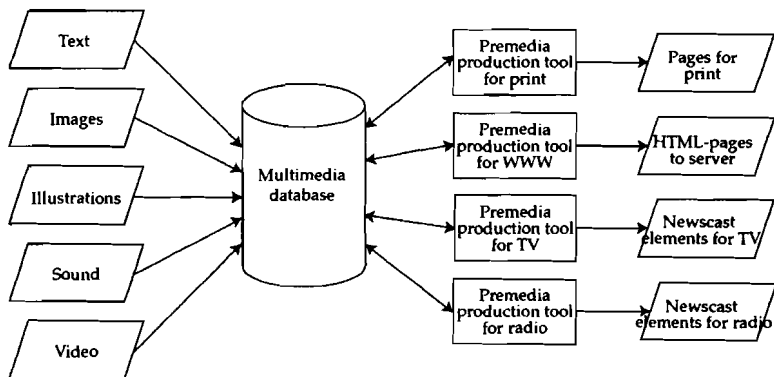
During the past two decades computer technology has revolutionised newspaper production work. Journalists and reporters of today use computers and computerised editorial systems to write texts, process images and report on news events. However, the different editorial subsystems, such as text editing, page composition and image processing, have not traditionally been compatible or properly connected to each other.

The convergence in technology for news publishing in different publishing channels, and the closer links between different publishing forms and companies put new demands on the use and design of publishing systems. Where, for example, newspaper companies previously processed and stored text, still images and illustrations, they now have to add animations, sound and video if they wish to exploit the new electronic publishing channels.

In order to utilise the created content in form of different publishing elements (Sabelström et al, 1997) in different publishing channels, the editorial production and publishing systems have to be designed in a way that enables access from all subsystems in a standardised way (Enlund et al, 2000). One solution presented earlier by the author, is to build up the editorial production and publication system as a media database connected to several specialised subsystems (Sabelström, 1999). *See Figure 1.*

The different processing subsystems should work transparently towards the media database. All edited media elements would then be stored in the database, with metadata attached to it in form of information about what edition the element was edited for and published in, by whom, and

other relevant information. This would make the media database function as a storage for all content created in the editorial department, as well as an electronic media archive.



Source: Sabelström, 1999

Figure 1. Model of technical premedia solution for multichannel publishing.

In addition to the media database and its connected subsystems, systems handling information connected to the content have to be further utilised. In such an information system, the journalist's experiences from the daily editorial work together with information on the news gathering work related to, for example, an article or a video sequence would be stored. This should be done in order to create a valuable knowledge bank from all the knowledge "stored" in the brains of the editorial staff (Runeland, 1999; Bartlett, 1994).

All the above-mentioned integrated systems become even more essential when technology that enables remote work is introduced in journalistic work. With the help of mobile access to the Internet and the web, e-mail, videoconferences etc., reporters can in fact function as virtual editorial staffs working together from different parts of the country, or the world. (Pavlik, 1998; Sandberg, 2000)

4. Differences in working methods among journalists

Journalistic foundations are the same in all the different forms of publishing, but the working methods differ. These differences have at their base the publishing channels' differences in narrative technique and speed.

Radio, television and the web are rapid publishing channels with short lead times to the general public. Of course not all the information or

programmes are published or transmitted in real time (directly), but the possibility of doing so exists. The printed newspapers however, take far more time from the production of texts and images to the completed version that reaches the final consumers.

The creation and production of content for the different publishing channels have different rhythms (Figure 2). In daily newspaper publishing the production rhythm is rather slow as the printed newspaper is normally published once a day, and there are usually only a few deadlines to follow. In radio and television broadcast the production and publishing rhythm is somewhat faster. The created content is published (broadcast) at least two or three times a day. Unlike newspaper production there is no real difference between broadcast editing and production and they are carried out almost simultaneously. Even faster is the publishing rhythm for the WWW. Content is published continuously day and night with no deadlines. The distribution phase is integrated with the production.

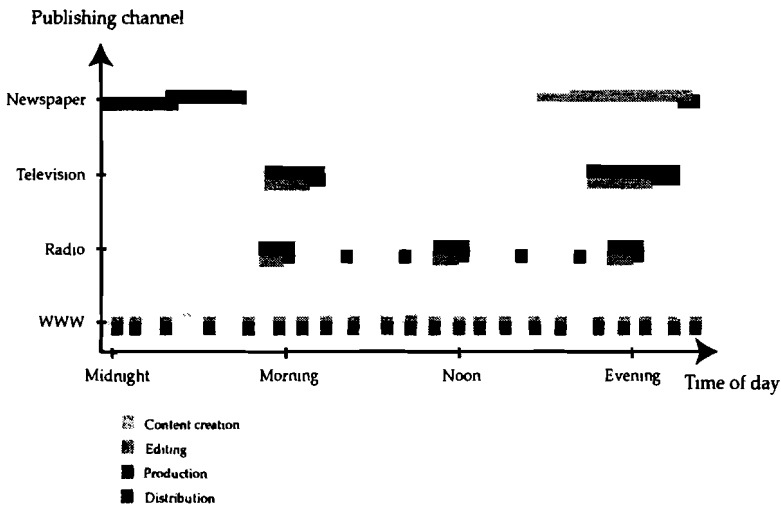


Figure 2. Example of different production and publication rhythms in different publishing channels.

Narrative techniques of the different channels of publication also differ vastly. Television and radio are dynamic publishing channels; television on one hand is dependent upon movement, while radio is speech-based. In the newspapers the message is communicated with the aid of written language and still images, while the radio is based on spoken language.

The web today is a combination of the three forms of publication above, but it is still rather static and based mostly written text and still images. See Figure 3.

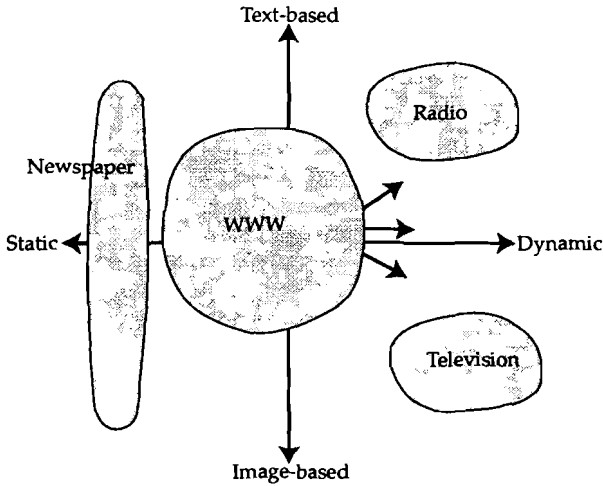


Figure 3. Narrative bases for different publishing channels.

This will surely change in the future as technology, availability to the public en masse and speed of data transmission are further developed. Newspapers, radio and television stations on the web publish the majority of their material in text form with still images, but improve, explain and increase the depth of the material with the help of video, sound and animation (Svenska Dagbladet, Sveriges Radio, Sveriges Television, TV4).

4.1 Various approaches to the gathering of information

One great difference in the working methods between a television reporter and a newspaper reporter is the planning of an assignment. A news report for a television broadcast must be carefully planned in advance, and the reporter must have carefully thought through what he or she wants the end result to be. As information in the publishing channel (TV) is presented sequentially (i.e. within a defined time and according to a clearly defined order, which cannot be influenced by the viewer) with the help of moving images, it is extremely difficult to subsequently supplement the report in any way. As the camera equipment has been packed away and as the reporter has, for example, already left the person he or she has interviewed, it is not possible to ask further questions

or to supply further comments on the videotape. However, sequences can be edited and rearranged.

On the other hand a newspaper reporter always has the opportunity to telephone the person interviewed to ask further questions and broaden the report. A newspaper article is not sequential in the same way as a television segment. Still images and text do not have as close a link to each other and the text can subsequently be edited in order to achieve a suitable scope and logical order.

Journalistic work for the web and radio is somewhat of a mixture of the above mentioned. Radio is certainly a sequential medium but it is speech-based. The radio reporter, like the newspaper reporter, can always improve the depth of his or her reporting afterwards, but possible interviews, which are to be presented, must have been as meticulously planned as interviews recorded for television. The World Wide Web is anything but sequential. Possibilities for the reporters to increase the depth of their reporting are virtually limitless. Although the same principles for the planning of video and sound apply for radio and television, the information can easily be complemented and broadened with the aid of text, animation and links to other interesting sources of information (Turpeinen, 2000).

5. Differences in Content

As previously mentioned, the various publishing channels differ in character. The result of this is that there are great differences in the presentation of news content.

5.1 Fast versus slow publishing channels

Television and radio, and to a certain extent the web, are direct publishing channels in that they reach a large part of the public with the same message at the same time. The lead-time from the collection of news by a reporter until the point of time when the public can receive the information is, as has been previously mentioned, rather short. This means that it is possible to present all the very latest news (Sabelström 1998). The morning newspapers have difficulties achieving this to the same extent as they often go to press around midnight or earlier and subscribers cannot read their newspapers before breakfast the following day. Despite this, reference is often made to newspapers in radio and television broadcasts.

The division of staff differs for different publication forms. A television newsroom consists largely of a staff of cameramen and technical personnel and fewer reporters than in a newspaper newsroom. This can be one of the reasons why the apparently odd references to news from newspa-

pers are made in the faster publishing channels. Yet another reason could be the often strong brand names and reliability of large morning newspapers. The printed newspapers' limited ability to report the very latest news and their non-sequential structure, together with their ability to publish additional in-depth information, compared with radio and television, allow newspaper reporters to "find" pieces of news which remain durable over a longer period of time. This work method demands large personnel resources, something that many radio and television newsrooms lack. Television and radio newsrooms get ideas from the morning newspapers and can work further on the material from different perspectives so that it can later be presented in their news broadcasts.

At *The Tribune Company*, Chicago, Illinois, USA, the television programming division consciously utilises the capacity and knowledge of the journalists of the editorial department of the printed version of *Chicago Tribune* to make in-depth analyses of different news on camera also. (Sabelström, 1999; Runeland, 1999; Enlund et al, 2000)

5.2 Superficial versus in-depth news reporting

The restraints placed on radio and television in their presentation of information sequentially makes in-depth reporting difficult. Certainly there are differences between the different newsrooms at different television and radio companies, but the amount of information is always less than in the major morning newspapers. The fact that a television programme is restricted to a specific time and that it is impossible for the viewer to be able to choose for him- or herself those parts of the programme that he or she would like to see, causes news reporting to be more general and superficial than that in newspapers. During the past years there has been a trend with shorter more superficial news reporting, especially in television. In Sweden, the average video sequence in news reporting has been shortened from around 13 seconds in 1982 to 5 seconds in 1995. The average sound bite in television news reporting decreased in the same period of time from around 35 seconds to a bit more than 20 seconds. In addition to this, the type of news reported has changed towards more popular and easy news, sometimes called "infotainment". Accidents and crimes get relatively more time than, for example, political reporting or other more serious content. (Hadenius et al, 1999) The same trend can be seen in newspapers like *USA Today* <www.usatoday.com> and the Swedish free metropolitan newspaper *Metro* <www.metro.se>. Perhaps this will be changed as digital television enters people's homes, but it remains to be seen.

6. Limitations in the re-use of editorial material

Efforts to re-use as much editorial material as possible between the different editions in different publishing channels certainly cannot always be recommended (Sabelström et al 1997; Sabelström 1998). In some cases though, re-use in combination with improvement or heightened adaptation can be motivated. Examples of such re-use are *Taltidningen* ("The Talking Newspaper") – a special edition of *Svenska Dagbladet* for the visually impaired (Sabelström et al, 1997) – and the radio and television companies' text versions of reports on the WWW.

In order to be able to achieve as much synergy as possible in the adaptation of previously published news content, one ambition is to automate production as much as possible. Theoretically, written texts from printed newspapers could be converted into synthetic speech, and speech from radio and television broadcasts could be converted into text. Technically, this is a possibility today, but as yet the quality of, e.g., synthetic speech is too poor for it to be able to compete with human speech.

Aside from the technical factors which prevent or at least make effective re-use of editorial material more difficult, other factors, such as the different uses of language in text and speech and inadequate routines for the storage of editorial texts for television and radio, affect the possibilities of automation of adapted material.

The use of language in the written text is rarely suitable for direct (word for word) reading. The spoken text sounds artificial and the melody and rhythms of the language are not natural. In addition, the written language allows for longer and more complicated sentences than the spoken language. These are just two of reasons why the synthetic spoken language is not attractive to the subscribers to *Taltidningen*. The same problem, although in reverse, exists when scripts for television and radio are written in the spoken language. The text cannot be presented without adaptation in the written form, where demands on spelling, choice of words and sentence construction in the written language are greater than in the spoken language. In radio and television news broadcasts there are often regional and international reports. Inadequate routines for the storage of the external reporters' scripts make the publication of the reports in text form difficult.

Today the linguistic problems and the problem of inadequate systematic storage of scripts are for the time being solved with the help of manual labour. Professional readers and actors record *Svenska Dagbladet's* version of *Taltidningen* on tape. Some texts are re-edited so that they sound better in the spoken language and some introductions are changed in order to help the listener approach the article more easily. As regards news segments from radio and television, which are presented in the form of

sound, video and text on the WWW, the texts are adapted by hand. Either the script is rewritten or the report is recorded and set down in writing. (Enlund et al, 2000)

7. Conclusions

Editorial work in radio, television and newspapers has both similarities and differences. For example, the journalistic ideas and ethics are the same, but the way of compiling, adapting and presenting information differs. The sequential narrative of radio and television places different demands upon the planning and adaptation of the report than the less sequential narrative forms of newspapers and the web. Texts and images are static elements (Sabelström, 1997) that can be complemented and arranged relatively independently of each other. Sound and video on the other hand are dynamic elements and the compilation of information is dependent on time (i.e. every single frame in a video sequence must be put together with the others in a logical order both in space and time). This results in different working methods for journalistic work in different media.

In the future the reporter's working role will probably be redefined, just as it was redefined when the computer made its entry into editorial offices and newspaper production at the end of the 1980s and the beginning of the 1990s (Petersson et al, 1996). In (the relatively near) future, journalists with different medial origin will have to create content with more than one publishing channel in mind (Northrup, 1999) The reporter him- or herself will carry out news reporting that does not require the highest video, sound or image quality available. There is, however, always the risk of deterioration of journalistic work if the very same person takes over the tasks of many people. (Sabelström, 1999; Enlund et al, 2000) Journalistic credibility and quality must be seen in relation to the savings that are made both in terms of time and economy. However, it is vital to point out that through training and continued studies, the different professional groups active within news reporting will be able to begin to think and act in a multi-medial way, transcending their professional boundaries in their daily work. This will probably lead to more new ideas, a better use of personnel resources and better content. (Sandberg, 2000)

Today the technology needed for easier reporting with images, sound and video is available for everyone on the editorial staff. Routines for deciding which qualities are adequate for the redistribution of every individual report must be established. This quality judgement must also exist in automated adaptation of editorial material from one element type to another, for example from written text to sound. At the end of the

day it is the reader's, listener's or viewer's idea of what constitutes acceptable quality, and his or her adaptation to new forms of news reporting, which will determine how far this process of automation can be taken. (Sandberg, 2000)

8. References

Literature:

- Bartlett, D.
1994 "The Soul of a News Machine: Electronic Journalism in the Twenty-First Century", *Federal Communications Law Journal*, Vol. 47, No. 1, October 1994.
<<http://www.law.indiana.edu/fclj/pubs/v47/no1/bartlett.html>>, 22 March 2000.
- Enlund, N., Lindskog, T.
2000 "Nya redaktionella processer vid flerkanalpublicering" ("New editorial processes for multichannel publishing" – in Swedish), Hvitfelt, H., and Nygren, G. (eds.), *Digitala medier och säljande nyheter – på väg mot Medievärlden 2020*, Studentlitteratur, Lund, 2000, pp 68–82. *To be published.*
- Hadenius, S., Weibull, L.
1999 "Massmedier – Press, Radio & TV i förvandling" ("Mass media – Print, Radio & TV in transformation" – in Swedish), Albert Bonniers förlag, Stockholm, 1999.
- Kvale, S.
1983 "The Qualitative Research Interview", *Journal of Phenomenological Psychology*, Vol. 14, No. 2, pp 171 – 196.
- Lundblad, N.
2000 "Tidningsbranschens framtid: några tentativa frågor" ("The future of the newspaper business: a few examining questions" – partly in Swedish), e-tidskrift för teknik, samhälle och individ, Vol. 1, No. 2, February 2000.
<http://www.esociety.nu/lundblad2_e_vol1_no2.pdf>, 22 March 2000.
- Northrup, K.
1999 "Newsrooms of the future will have new look to go with new outlook", *Newspaper Techniques*, No. 12, December 1999.
- Pavlik, J.V.
1998 "New Media Technology: Cultural and Commercial Perspectives", Allyn & Bacon, Needham Heights, MA, USA, 1998.
- Petersson, J., Sabelström, K.
1996 "Organisationsförändringar i tidningarnas förpress" ("Organisational changes in newspaper prepress" – in Swedish), project report, Div. of Graphic Arts Technology, Royal Institute of Technology (KTH), Stockholm, 1996.
- Reason, P.
1994 "Three Approaches to Participative Inquiry", in *Handbook of Qualitative Research*, Denzin, N.K. & Lincoln, Y.S., Sage Publications, London, 1994.
- Rosenqvist, C.
2000 "Development of new media products - case studies on web, newspapers and magazines", thesis for the degree of Doctor of Technology, Royal Institute of Technology (KTH), Stockholm, 2000. *To be published.*

- Runeland, E.
1999 "Newsroom for a Digital Age" (in Swedish), report from the Ifra seminar, 7–8 December 1999, Darmstadt, Germany.
<http://www.openpremedia.com/dok/digital_age.html>, 22 December 1999.
- Sabelström, K., Nordqvist, S., Enlund, N.
1997 "Synergy in Integrated Publishing of Printed and Electronic Newspapers", *Advances in Printing Science and Technology*, vol. 24, Bristow, A. (ed.), Pira International, 1997, pp 191–211.
- Sabelström, K.
1998 "Consumer Needs and Competing Products in Printing and Publishing", Paper presented at the ITS'98 conference "Beyond Convergence", Stockholm, Sweden, 1998, and submitted to the ITS'98 Proceedings.
<<http://www.its98.org/conference/theme1.asp#5>> (3 January 2000)
- Sabelström, K.
1999 "Newspaper Premed Workflows for Parallel Publishing", Proceedings for the TICGC - Taipei International Conference on Graphic Communications, October 1999, Taipei, Taiwan. *To be published.*
- Sandberg, H.
2000 "Centralredaktionen – snart ett minne blott" (The newsroom – soon merely a memory" – in Swedish), *Pressens Tidning*, No. 3, 17 February 2000.
- Turpeinen, M.
2000 "Customizing News Content for Individuals and Communities", thesis for the degree of Doctor of Technology, Helsinki University of Technology, Acta Polytechnica Scandinavica, Mathematics and Computing Series No. 103, Espoo, 2000.
- Westlander, G.
1999a "Forskarroller i varianter av aktionsforskning" ("Researcher roles in variants of action research" – in Swedish, Internal research report, KTH/MMK/IPU
- Westlander, G.
1999b "Data collection methods by question-asking", Educational compendium, KTH/MMK/IPU.

Interviews:

- Beck-Friis, Ulrika
2000 Reporter, Nyhetesredaktionen TV4 / Multimedia reporter, Näringslivsredaktionen *Svenska Dagbladet*
- Borgdalen, Annika
1999 Reporter, Inrikesredaktionen *Svenska Dagbladet* / Editor, Nyhetsredaktionen TV4
- Jacobsson, Torbjörn
1998 svt.se/nyheter, *Sveriges Television*.
- Sinka, Stefan
2000 Editor-in-Chief, *Taltidningen, Svenska Dagbladet*.

World Wide Web:

Mediearkivet	< http://www.mediearkivet.se >
Svenska Dagbladet	< http://www.svd.se >
Sveriges Radio – Ekot	< http://www.sr.se/ekot/lyssna >
Sveriges Television	< http://www.svt.se/nyheter >
TV4 – Nyheterna	< http://www.TV4.se/nyheter >