The Technicalization of Journalism: Impacts on its Structure and Function

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I Introduction

For about twenty-five years numerous scenarios have tried to sketch the contours of (future) journalism. During this period of time the factor 'technology' has become increasingly important for editorial production. The trend has gone from the implementation of electronic editorial systems (for print media) in the mid seventies via electronical broadcast (for TV) in the eighties to the latest concepts of multimedia or cross-media journalism.

Currently especially the rise of the Web and its technological implications are one of the main reasons for a new acceleration of technicalization and economicalization in journalism. Journalism therefore faces a difficult challenge in applying professional standards to the Web. Technology has an impact on operational procedures and technological innovations have often been important for modifications of professional procedures, professional rules and in general for the distinction between technology and newsroom (Weischenberg 1982, Ursell 2001). In connection with these processes information and communication technologies are about to make it possible that mobility barriers between media subsystems can be (technically) overcome – some examples show that this has already happened.

This is exactly the starting point of this survey: It deals with a particular phenomenon which is referred to as multimedia differentiation and which is accompanied by various forms of media convergence with regard to technical, functional, economic, regulative and receptive processes of convergence. Especially the increasing diffusion of the Internet strongly influences different forms of structural differentiation and de-differentiation in journalism. In addition to many other Web contents a rapid development of online journalism can be observed which in turn has varied retroactive effects on ‘traditional journalism’. Nevertheless the various attempts to define and to demarcate a specific kind of ‘online journalism’ have disregarded the effects of online communication on the whole system of journalism, its work flows and routines. On the one hand ‘traditional journalism’ is explicitly or implicitly still used as a benchmark to define the specifics of online journalism. On the other hand the standards of journalism itself are constantly and effectively being changed through feedback and hybridisation.
processes between on- and offline journalism so that in turn the underlying benchmark itself is changing constantly as well.

Due to this fact these developments should be observed simultaneously and with regard to journalistic work and procedures under the influence of convergence processes and cross-media synergies in connection with so called media brands: A specific kind of ‘multimedia journalism’ (not equal or subsumable under online journalism) is perhaps only observable as an outcome of the entire reaction processes between on- and offline journalism.

II Theoretical framework: The empirical observation of differentiation

The ability to change and transform is an inherent characteristic of the structure of systems. It enables the system of journalism to adapt to changing environmental circumstances. This process of adaptation develops (to a certain degree) 'function neutral'. Therefore the function of the system is more stable and consistent than the structure of the system (cf. Loosen/Meckel 1999: 390). The structural differentiation of journalism is – further and increasingly accelerated by the 'catalyst internet' - particularly obvious and it is so dynamic that it is almost impossible to decide at first glance, whether or not it is still maintaining the function. An important cause - and at the same time consequence - of these processes is the differentiation of media offers in an inter- and intra-medial frame. Some of these forms of structural differentiation, e.g., on the level of media content can be observed directly, others, e.g., on the level of media organization, can only be observed indirectly. As media type-specific functions (print, TV, online) develop in relation - in other words complementary - to each other, they should also be analyzed in difference to each other (vgl. Schmidt 1996: 3 f.) this should not exclude the possibility of discovering new forms of multi functionality and forms of hybridization through ‘inter media interaction’.

(Structural) phenomena of diversification within journalism can either lead to a functional increase or decrease of performance. This would, e.g., be the case, if basic journalistic performances would increasingly be taken over by other systems or if a 're-coding' of the journalistic function, e.g., by economical or political influences took place.
This study examines the structural differentiation of journalism by focusing on the example of multi media performances of journalistic media brands (cf. Siegert 2001), which shall be described as multi media diversification.

For some time these multi media performances of journalistic brands have been associated with terms like 'cross media' and 'synergy effects'. Except for a few studies (cf. Brüggemann 2002, Loosen 2001) in the field of communication science, these concepts are predominantly being discussed in economics and are just about to become a topic in media economics (cf. Siegert 1999: 61 ff.).

The term 'synergy' is mostly being used in connection with an increase in economic efficiency. In journalism this concept often meets with disapproval as economic efficiency is mostly connected with an increase of economic influence and a decrease of editorial autonomy – which actually doesn't have to be a causal consequence. So far the impact of these (economic) processes on journalistic work and procedures has hardly been examined.

In the following the term 'synergy' is used in a much more general and less marketing orientated sense. It doesn't concentrate on the multiple use of journalistic content (cf. Heinrich 1994: 172), which was the focus of the first comparisons between the print media and their online offers (cf. Neuberger 1999); in the meantime structures are too differentiated to restrict observations to that level.

### III Method

The inter- and intra-media differentiation of media is analyzed on the basis of the German media brands "Spiegel", "Focus" and "Stern". All of these three media companies publish a weekly print magazine ("Der Spiegel", "Focus", "Stern"), have an online service ("Spiegel online", "Focus online" und "Stern.de") and a weekly broadcast TV format ("Spiegel TV Magazin", "Focus TV", "Stern TV"). In all companies all three formats are produced in different newsrooms. Even though each of the three sample titles is positioned more or less differently (from news magazine to popular magazine: "Der Spiegel" could be compared to "Time Magazine", "Focus" is similar to "Newsweek", the "Stern" could be described as a more popular magazine than a news magazine) this sample guarantees the best possible selection for the German market,
which allows the comparison of inter- as well as intra-media aspects in a similar segment.

Table 1: Research Objects

<table>
<thead>
<tr>
<th>Formation</th>
<th>Utilization</th>
<th>Editorial Staff(^4)</th>
<th>Technical Staff/Production(^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Der Spiegel (weekly)</td>
<td>1947</td>
<td>1.065.625(^1)</td>
<td>approx. 280</td>
</tr>
<tr>
<td>Spiegel online</td>
<td>1994</td>
<td>Visits: 17.132.009(^2)</td>
<td>29</td>
</tr>
<tr>
<td>Spiegel TV Magazin (weekly, RTL)</td>
<td>1988</td>
<td>2,56 million viewers(^2)</td>
<td>20</td>
</tr>
<tr>
<td>Focus Magazin (weekly)</td>
<td>1993</td>
<td>768.281(^1)</td>
<td>approx. 202</td>
</tr>
<tr>
<td>Focus online</td>
<td>1996</td>
<td>Visits: 7.510.488(^3)</td>
<td>24</td>
</tr>
<tr>
<td>Focus TV (weekly, ProSieben)</td>
<td>1996</td>
<td>1,72 million viewers(^2)</td>
<td>18</td>
</tr>
<tr>
<td>Stern Magazin (weekly)</td>
<td>1948</td>
<td>1.040.229(^1)</td>
<td>approx. 177</td>
</tr>
<tr>
<td>Stern.de</td>
<td>1995</td>
<td>Visits: 4.058.527(^3)</td>
<td>12</td>
</tr>
<tr>
<td>Stern TV (weekly, RTL)</td>
<td>1990</td>
<td>3,22 million viewers(^2)</td>
<td>23</td>
</tr>
</tbody>
</table>

\(^1\) Sold print run according “IVW”, quarter 1/2002(http://www.ivw.de)  
\(^2\) Viewers as of 3 years, average range for 2001 (cf. Darschin/Zubayr 2002: 210).  
\(^3\) May 2002, source: “IVW” (http://www.ivw.de).  
\(^4\) Sources: Interview statements, Mastheads, Homepages

The influences on journalistic procedures and output within such an 'association of newsrooms' are being analyzed on the basis of qualitative face-to-face interviews\(^1\) with chief editors, associate editors or a project manager, since various forms of media synergies are not observable on the level of media output only (e.g., the multiple use of contents and medium specific forms of adaptation). It can be assumed that particularly the intentions and attitudes of chief editors do have strong relevance for the processes in the newsroom. Moreover, it can be postulated that even an intended separation and autonomy of individual newsrooms requires a minimum of coordination and therefore forms of mutual observation.

The interview guideline refers to processes of coordination on the level of contents, personnel, organization, technology and strategy between the individual newsrooms

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\(^1\) The interviews were conducted from the middle of March to the beginning of May 2002.
within a multi-media association. Questions that reflect the relation among the different editorial offices are vital and concentrate on the following aspects/dimensions:

- Coordination of contents: Forms of mutual observation, strategies of placing and adaptation of subjects, multiple use of contents, exchange of research materials, mutual participation in meetings
- Coordination and collaboration of editorial staff: Mobility between and within the newsrooms, form and extent of contacts to the other newsrooms
- Organizational and technical coordination: existence/installing of coordinator positions, sharing of archives and news agencies, technical equipment and infrastructure among the newsrooms, integrated production processes
- Strategic coordination: positioning of the newsroom within the association, internal and external perception, cross media marketing

The individual newsrooms have to be regarded as elements of a specific structure of media institutions which makes it necessary to consider:

- absolute variables (any newsroom and its journalistic output separately)
- relational variables (relations between the newsrooms and their output to the respective other newsrooms)
- contextual variables (newsrooms and their output as part of a superior institutional structure)

The survey design of the study, which is the basis of this paper, is a methodical combination of a quantitative content analysis (of the media output of each of the nine newsrooms within an ‘artificial’ month\(^2\)) and qualitative face-to-face interviews. In the following only the first results of the interviews are presented. Nevertheless, there will also be a short outline of the content analysis design:

The comparative content analysis refers to articles and subjects of several media of the same media organization and therefore starts on the level of the journalistic output. This permits an examination of media type specific (print, TV, online) choices of subjects as well as differences between media brands ("Spiegel", "Focus", "Stern"). In doing so different dimensions of analysis are relevant:

- Forms of media type specific subjects mixes

\(^2\) The content analysis ran during the following weeks in 2002: 28 of March; 13-19 of April; 4-10 of May and 25-31 of May.
Forms of mutual media references

Forms of internal and external subject overlaps (exclusive subjects versus overlaps between print/TV, TV/online, print/online, print/TV/online)

Forms of media type specific processing

The subject can be regarded as a 'sculptor of structure' in journalism (diversification into departments, experts for different topics, diversification into special interest media, selection by topics) (cf. Dernbach 2000). 'Subject' as the unit of analysis is therefore regarded relatively strictly as a journalistic subject (news/story), as it is dealt with - also depending on the frequency of publication - e.g., in editorial staff meetings. In doing so subjects can be identified across different media. This shall, e.g., allow the analysis whether 'multi media' topics offer more background information and whether they are processed in a more manifold way or not.

IV Results

The analysis of the qualitative face-to-face interviews orientates itself at the abovementioned different forms of coordination processes between print, TV and online newsrooms in each of the sample companies.

Coordination of contents

Nearly all newsrooms consider their own print and online products as obligatory reading. In contrast to this neither the print nor the online newsrooms watch their respective TV formats regularly. Observation of the subject structure takes place either through personal relations, subject lists, which are forwarded by the TV newsrooms, or by logging on to the homepage.

All in all there are more or less regular discussions concerning the current contents and subjects, which the individual newsrooms work on. In all cases the printed format is the almost exclusive benchmark, which means that topic lists and partly even preprints of the magazine are sent to the online and the TV newsrooms. Almost any time especially the online newsrooms feel impelled to care actively for additional information on their own. In any of the three TV newsrooms output of the print and online newsrooms influences the daily work in an insignificant way only. Current topics (and related research materials and contacts) of the other newsrooms are regarded as one of many information sources only. Cooperation therefore takes place on an irregular basis only.

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and is described as an exception by the TV chief editors. The additional efforts for coordination which is necessary for a cooperation between different newsrooms is obviously that immense that it only take place in exceptional cases. Day-to-day routine generally takes place without cooperation between the newsrooms.

In all companies examined the closest cooperation is the one between print and online. Cooperation on the content level between online and TV is again closer than between print and TV. The online newsrooms seem to be in a kind of in-between position with a slightly stronger tendency towards print.

Mutual participation in editorial, departmental or subject-related meetings can be regarded as one possibility to institutionalize contacts. This, however, is organized very differently in each company and in each newsroom.  

? The Berlin newsroom of the "Spiegel online" editorial staff uses the same premises as the Berlin print staff, they all participate in the same meetings; the online chief editor occasionally participates in the conferences of the department heads of the magazine; a representative of "Spiegel TV" and sometimes also an online representative usually take part in the 10 o'clock meeting at "Der Spiegel" (the head quarter of all newsrooms is located in Hamburg, the distance between the newsrooms is about 500 meters).

? Representatives of the TV newsroom regularly attend the daily meeting of "Focus Magazin" and the meeting of the department "Germany" (all newsrooms are located in Munich but in different buildings, the distance runs from two to four km).

? At "Stern" the online editors regularly take part in the conferences of the referring print departments (the TV newsroom is located in Cologne, print and online in Hamburg).

Forwarding of content of "Der Spiegel" to "Spiegel online" is extensively systematized whereas according to the online chief editor solely two to four percent of the online contents are based on articles of "Der Spiegel". Two days before publication of the magazine articles of the title story can be purchased online, further articles are available for free once the magazine is published. This leads to the conclusion that the direct multiple use of content plays a minor role. The same can be stated for the online newsrooms of the "Stern" (according to the online project manager ten to twelve articles

\[3\] Obviously the mutual participation in meetings is additionally perceived very differently as the statements are in most cases from one source only.
per week are taken over from the magazine) and of "Focus" (although there was no exact information available in this case).

More important for the online newsrooms is the surplus material, which is a 'natural byproduct' of the magazine. The only exception is "Focus online" which is rather conceptualized as a "utility database" and in large parts is not orientated at the department structure of the magazine.

At "Der Spiegel" and "Stern" it is described as routine that stories that don't make it to the print issue or that are "burnt out" by the time the magazine is published, are passed on to the online newsroom. Nonetheless both online newsrooms wish that "online would be considered more intensively". At "Focus online" a more intensive cooperation, above all concerning subjects that are picked out as a central theme in each of the three media types, is also regarded as imaginable.

**Coordination and collaboration of the editorial staff**

All interviewees basically agreed that the cooperation between the newsrooms cannot completely be institutionalized and stated that this would also not necessarily be desirable: cooperation "cannot be ordered from above, it only works through the people themselves" (associate editor "Focus Magazine"). Everyone stressed that contacts on the level of individuals are by far most important and effective. Overall, however, there are some indicators, which have an obviously lasting influence on how useful cooperation between the different media types is perceived and on how intensively it is considered at all.

As firmly institutionalized forms of cooperation are rather the exception (see paragraph Organizational and technical coordination) the degree of cooperation (still) seems to depend on personnel decisions. At newsrooms where editorial staff has transferred from one newsroom and the other (which is still rather uncommon and mostly occur from print to online) cooperation intensified as a consequence. It is considered as a main advantage that those colleagues do exactly know the way the other media type works. It is therefore easier for them to react on inquiries of the other newsrooms or do more often think of the colleagues if they are not able to use a story within their own medium. Print and online newsroom of "Spiegel" consider it as very important that the chief editor of their offices has experience in both media types and therefore is able to play an
integrative role. Especially at "Spiegel online" it was pointed out that due to the excellent contacts to the print newsroom it was possible to build up a solid cadre of editors with whom there is a regular cooperation and who are willing to pass on stories to the online newsroom: "The print colleagues are used as if they were quasi-free-lancers" (chief editor "Spiegel online"). The other two online newsrooms describe this form of cooperation considerably less significant.

Organizational and technical coordination

A rigorous organizational implementation of a coordination position between individual newsrooms exists only partly and in different ways. At "Der Spiegel" a coordinator position was created. It was filled by a female editor who had worked at "Spiegel TV" first and then at the magazine. At the time of the interviews the position had not been filled as the editor was on parental leave and had not been replaced. Experiences with the work of this editor were mentioned very rarely (one of the interviewees didn't even know that it was not occupied): On the one hand there was the statement that this function was especially filled out by Stefan Aust just as well, since he as the chief editor of the magazine and interim manager of "Spiegel TV", always had an eye on the potential cooperation between these media. On the other hand it was stressed that the coordinator had played an important integrative role and had been respected by all editors.

In the newsroom of "Focus TV" there are two so-called planning editors, who take care of the topic schedule of the broadcast and also coordinate contacts to the newsroom of the magazine. A coordinator position has recently been created within the magazine's newsroom, which besides the public promotion of "Focus" also takes care of contacts to the online branch. "Stern" magazine plans to create a coordinator position between print and online.

At "Spiegel" as well as at Focus" and at "Stern" all newsrooms share the same basic sources, this means all are linked to their internal archives and documentaries and use the same news agencies. Only at "Spiegel online" a special contract was mentioned that

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4 The chief editor of "Spiegel online" was editor, associate head of the department “Germany” and foreign correspondent at "Der Spiegel" before.
prohibits the direct integration of news agency material into the online content as this reduces the fees considerably.

While a minimum of synergies between the newsrooms is realized on this level, the situation is already different on the level of the operating systems used: In most companies there has been a development of 'parallel worlds'. This means the print newsrooms work on Macintosh computers and with their own content management systems whereas the online newsrooms use PCs. According to the associate magazine editor only at "Focus" there is "no technical problem that would hinder the networking". The implementation of an integrated medium-agnostic production system plays at best a role within centralized work groups. The main evaluation criterion in this situation is that when such a costly system is implemented there should be a reasonable return on investment. Therefore the print content is transferred manually into the system of the online newsroom: "It is hard work for us to build "Spiegel" stories into our system, i.e., a lot of manual work is necessary, if this was automated we could save a position or we could replace a technical position by a journalistic one" (chief editor "Spiegel online").

The latest technological developments, as for example the XML-based solutions of the news agency "Reuters", do not seem to play a role in the examined media companies yet. Another explanation is that the questioned editors are only marginally involved in the plans of their publishing houses because they don't see it as their job to care about the technical infrastructure. A stronger awareness of this topic was found only within the online newsrooms (which all have more or less been forced to adapt to infrastructures that were originally designed for the needs of print newsrooms) which are more confronted with technical problems in their day-to-day work than this seems to be the case in other newsrooms.

**Strategic coordination**

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Basically, work for the own product has absolute and highest priority for all newsrooms. This may also mean, "to just let the others on the left and right do what they want" (chief editor of "Stern TV"). The general position that "the cooperation naturally reaches its limits from time to time, as any journalist logically tries to have the scoop for himself and to keep it a secret" (chief editor of "Focus TV") also fits into this context. All in all especially the print newsrooms stress the leadership function and the central importance of the magazine, a view that is also accepted — even though with gradual differences — by the online newsrooms; the TV newsrooms are more reluctant in accepting that position. Especially at "Der Spiegel" all three media types stress that there is something like an in-house competition between the newsrooms. The print newsroom sees the TV-magazine as the main 'competitor', since it is also is published on a weekly basis.

The strategic positioning of the own newsroom is substantiated with the specific functions and possibilities of each media type: All interviewees emphasize that print, TV and online just function in different ways. On the one hand this is used as an argument for why certain forms of cooperation are simply impossible to achieve, on the other hand it is used to accent the journalistic niche and the importance within the company. In this context all online newsrooms point out that it was a more or less tough start for them within the company because a lack of acceptance of the online journalistic work. They nonetheless stress unanimously that in the meantime the online newsroom has established itself as a kind of "third pillar" (project manager "stern.de").

Particularly the interviewee of the online newsroom of "Focus" mentioned different reasons that get in the way of a closer cooperation: "Focus online" is part of "Tomorrow Focus AG", while print belongs to the "Focus Magazin Verlag". Both companies are separate, although there are several links by various investments. In this case questions about copyrights, as they normally occur when print content is adopted, will get very complicated and lead to a trend to rather refrain from adopting content. Furthermore, online is doing its own stories, as that way it is holding all license rights and the stories can be resold to a third party via content syndication. Whereas at "Der Spiegel" "it has in the meantime [...] become a part of the employment contract of the "Der Spiegel"

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6 This ranking is of course also measured according to where the 'money is being earned' and mostly the profit is made by print and TV.
colleagues, [...] that the contract [includes] work for "Spiegel online", as far as the editorial work allows that" (chief editor "Spiegel online").

All interviewees are aware of the possibilities of cross-media marketing which result from the three-media-unit. Some even state that there is a noticeable demand of advertising clients to book advertising space in either all of the three media. To some extent these possibilities are even regarded "as absolute strategy for the future" (chief editor "Focus TV"). Some of the interviewees even think that this development might be the trigger to intensify cooperation between the newsrooms.

V Discussion

The face-to-face interviews indicate a complementary structure of different media types, which all fulfill a (more or less) independent journalistic function; a more exact predication is not possible until the results of the content analysis are available.

The social and objective dimension of timeliness (Scholl/Weischenberg 1998: 77 f.) is obviously still perceived in a similar way in the print, TV and online newsrooms. The temporal dimension of timeliness as it is predisposed by the frequency of the single titles overall seems to have an obviously stronger impact on the work processes and thereby on the self-perceived possibilities to cooperate between the different media types. The possibilities – and partly also the willingness – to synchronize certain processes and interests between the different newsrooms have in part been described remarkably heterogeneously.

The dilemma of online journalism in the presented case studies seems to be that it has to acquire unique and online-specific ways of work (which according to the interviewees has already taken place) to develop its own profile. On the other hand online journalism has to be an integral part of a network within which it is more often receiver of input from other newsrooms than sender of own material (which is also due to the extremely different staffing of the newsrooms) and has to orientate itself at the standards of other newsrooms.

Vgl. Meier 2002: 93 ff., who points out how strong the temporal dimension of timeliness influences the structure of journalism.
The print and TV editorial in particular proved themselves as autonomous systems (cf. Meier (2002: 135 ff., Rühl 2000, Scholl/Weischenberg 1998: 71 ff., Rühl 1979) which look at their environment – which the other newsrooms also belong to – from their own perspective. At the online newsrooms this process of differentiation seems not to have taken place completely. The gradual differences between the studied online newsrooms provide an indication of a successive process, which is essentially influenced by institutional and organizational circumstances.

The momentum of the newsrooms is obviously so strong that it leads to the emergence of specific structures which quickly become incompatible with those of other newsrooms. Interlinkings only take place in a few cases and only selectively. All interviewees argue that synergies only work on the basis of the efforts of individuals or that an integrative person or a coordinating position is necessary which considers the needs of the different media types from a meta-level. On the one hand that would mean that journalists more than ever have to align diverse demands to live up to their respective role. On the other hand this would mean that the work in a 'multi media network' of newsrooms implicates structural differentiations, which is to be interpreted as assimilation to changed conditions.

The results give only limited indications for an ongoing maceration of the separation of editorial and technical roles. But a (temporal) acceleration of journalistic work processes and an increase of indispensable coordination processes can be determined which is promoted by convergence on the level of different media types and which in turn is based on processes of technicalization.

As the survey is based on case studies these results can be generalized only to a certain extent. Nonetheless it is self-evident that especially within the online newsrooms the separation between editorial and rather commercial roles is under consideration: All analyzed online services are organized as an independent Ltd. where chief editors resp. project managers are also responsible for the economic success. According to the interviewees these tasks partly exceed the journalistic functions.

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8 A system is “autonomous if it is able to select certain areas in its environment from which it gets certain impacts and in like manner or at the same time is able to shield from influences of other environmental areas” (cf. Scholl/Weischenberg 1999: 3).
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