Media repertoires as patterns of behaviour and as meaningful practices: A multimethod approach to media use in converging media environments

Uwe Hasebrink & Hanna Domeyer,
University of Hamburg, Germany

Summary:
This article proposes the concept of media repertoires as an instrument to overcome two challenges for research on media use: On the one hand it stresses the fact that individual patterns of media use include a composition of different media and that the way how the components of these repertoires are interrelated is a key to understanding people's media use. On the other hand it provides a conceptual framework that allows integrating quantitative and qualitative empirical work and thus overcoming the gap between large scale quantitative research on media use and small scale qualitative research on the subjective meaning of particular practices. This is demonstrated by a project on patterns of media use in Germany that combined a quantitative and qualitative part. Findings show how this kind of approach can provide a rich basis for understanding today's media related practices.

Keywords: Media repertoires, patterns of media use, complementarity of qualitative and quantitative methods.

1. Introduction

Research into media use traditionally focuses on the use of single media types such as television or newspapers or the internet, or of single genres such as news or daily soaps, or of specific topics or products; in doing so the entirety of different media that an individual uses and the interrelations amongst these different media are often ignored. On the other hand we see a growing need for trans-media approaches in research on media use because of the processes of differentiation and convergence of media technologies and media products and the increasing importance of cross-media strategies for media industries.

Research into media use is also characterised by a conceptual gap between two paradigms (for a recent overview see Nightingale, 2011). On the one hand there is the large industry of audience measurement and sometime also academic studies that aim at providing an accurate picture of people's media related contacts and behaviours (Napoli, 2011, Webster/Phalen, 1997); this kind of research mainly relies on large standardised representative surveys that allow for solid descriptions of aggregate audience behaviours. On the other hand there is a broad mainstream of academic, mostly qualitative research on audiences and reception processes that aims at reconstructing individual media use as meaningful practice within social contexts (Jensen/Rosengren, 1990, Livingstone/Das, 2009). Although both paradigms share individual and aggregate patterns of media use as their main object of investigation, there is no productive cooperation; as a consequence results of large scale audience measurement studies are generally highly descriptive and far away from people's everyday practices and thus "meaningless", while results from qualitative receptions studies have limited capacity to generalise their concepts and empirical findings to broader populations.

In order to help to overcome this gap of research on media use and to meet the above-mentioned challenge of cross-media environments, we have proposed the concept of *media repertoires* (Hasebrink & Popp 2006): The media repertoire of a person consists of the entirety of media he or she regularly uses. While the trans-media aspect is quite obviously an inherent characteristic of this approach – therefore it provides a conceptual basis to overcome the above-mentioned single-media bias of research on media use –, the concept of media repertoires also offers a potential to productively combine the two research paradigms and to link findings on aggregate patterns of behaviour and their distribution among the population with results of qualitative work on the meaning of media practices. From the perspective of a repertoire-oriented approach these two paradigms and their corresponding methodologies are regarded as the two sides of a coin – they do not exclude each other, instead they have to be taken together in order to get the full picture of trans-media practices (see below, Section 2.3).

This article sets out to elaborate this argument. Figure 1 characterises the two areas of research on media use as sketched above. Media repertoires as we conceive them can be regarded as a relevant issue for both areas: they may contribute to both kinds of research questions, since they are understood as patterns of behaviour – as such they are compatible with audience research - and at the same time they are understood as meaningful practices – as such they are compatible with research on media use as social practice. In order to make use of this integrative potential we will present and discuss a study that combined different methodological approaches to media repertoires.

In a first step we will shortly elaborate the concept of media repertoires and the conceptual distinctions that guide empirical investigations within the framework of this approach (Section 2). In the main part we will present a study that has been conducted in order to analyse comprehensive media repertoires in Germany and included two different methodological approaches: one of them uses in-depth interviews, media diaries and

methods of visualisation in order to reconstruct the subjective meaning of the entire media repertoire as well as of single parts of it (Section 3); the other one builds on classical survey data on the frequency and duration of use of different media (Section 4). In the concluding part we will discuss how the empirical evidence provided by the different methodological approaches can be integrated in terms of a repertoire-oriented research paradigm on media use (Section 5).

Figure 1: Media repertoires as conceptual link between two areas of research on media use
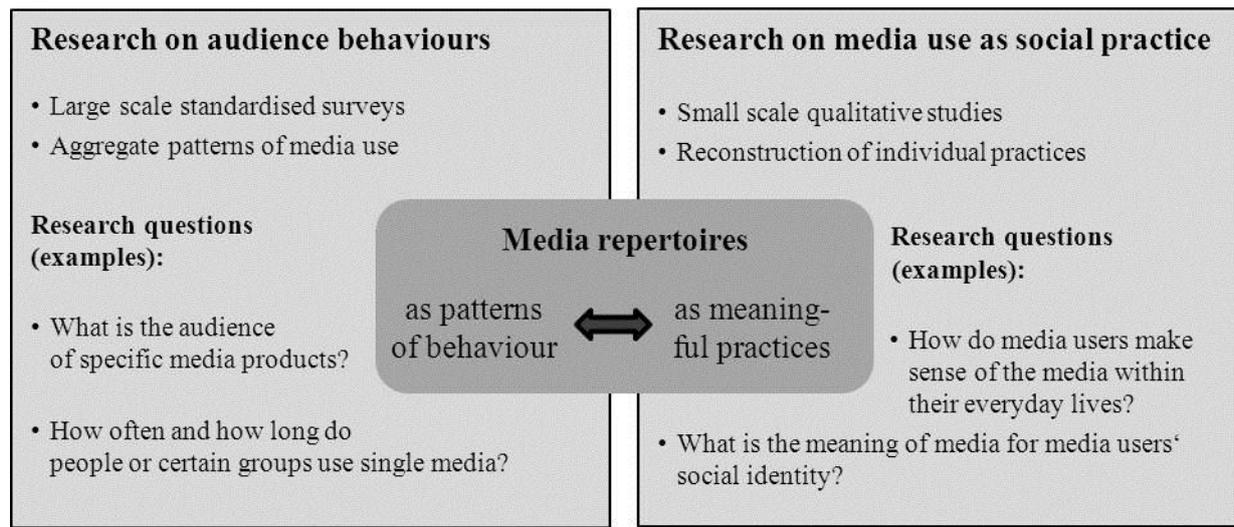
2. The concept of media repertoires

2.1 The conceptual basis
The concept of media repertoires as proposed by Hasebrink & Popp (2006) refers to the entirety of media that a person regularly uses. According to this media repertoires can be regarded as relatively stable trans-media patterns of media use. A repertoire-oriented approach to media use is characterised by the following principles:

- User-centred perspective: the concept of media repertoires moves the media user into the focus; rather than taking the media-centred perspective that asks which audiences a particular medium reaches this concept emphasises the question which media a particular person uses.
- Entirety: the repertoire-oriented approach stresses the need to consider the whole variety of media regularly assembled by a person; this will help to avoid misinterpretations resulting from approaches to single media.
- Relationality: within a repertoire-oriented approach the interrelations and specific functions of the components of a media repertoire are of particular

interest since they represent the inner structure or coherence of a media repertoire; this reflects our basic claim that the media repertoire of a user is not just the mere sum of different media he or she uses, but a meaningfully structured composition of media.

These general and quite abstract principles leave it rather open which phenomena can actually be analysed as media repertoires. In order to provide an analytical framework that can guide quantitative as well as qualitative empirical work on media repertoires we developed the following analytical distinctions or main categories: relevant components, empirical indicators, relations between components, general construction principles, and the overall subjective meaning of media repertoires (see Table 1 for an overview).

Components of media repertoires

Research on media use can be differentiated according to the concrete level of media the user relates to. This may be the level of media types (e.g. television, radio, newspapers, books etc.), of genres (e.g. news, documentary, drama, comedy etc.), of topics (e.g. politics, technology, health etc.) or of concrete media brands or products. The general concept of media repertoires does not define a certain level of media use as the "correct" level. In line with the user-centred perspective the argument is that it is a first relevant indicator to find out, on which level media users compose their repertoires – whether they select media types, or genres, or topics or concrete brands, or whether they rather select social contexts instead of certain media.

Table 1: Analytical framework for the description of media repertoires

Main category	Subcategories
Relevant components of media repertoires	Media types | genres | topics | concrete products/brands | social contexts
Empirical indicators for the description of repertoires	Contacts | preferences/attitudes | embeddedness in everyday routines | habits | 'addictive' behaviour
Relations between the components of the repertoire	Proportions of use | relevance | diversity | functional complementarity | compatibility vs. competitiveness
General principles guiding the composition of media repertoires	Selective vs. unselective | hedonism vs. conscientiousness | high vs. low prestige | decisions not to use certain media
Overall subjective sense of the media repertoire	Subjective theories | social context | personal values and ambitions

Empirical indicators for the description of media repertoires

From research on media use we know quite a range of empirical indicators for the relation between media users and certain media. The most prominent of them refer to actual behavioural contacts or episodes of exposure, for example the frequency and the duration of use. To our understanding there are also other indicators that can be used to analyse media repertoires, for example attitudes towards or preferences for certain kind of media, or the degree to which certain media are embedded in everyday routines, or different forms of bindings to specific media products, e.g. habits or 'addictive' behaviour or loyalties.

Relations between the components of media repertoires

While the first two categories are related to the single components of media repertoires and the kind of relation between media user and the respective media offer, the third category refers to the relational structure of repertoires. Indicators that reflect different aspects of the repertoire's relationality are the following: the proportions of use devoted to different media, the personal relevance attributed to the components of the repertoire, the diversity of the overall repertoire, the degree of complementarity between different components of the repertoire, and the compatibility or, to put it negatively, the competitiveness of parts of the repertoire.

General principles guiding the composition of media repertoires

The concept of media repertoires helps to reduce the high complexity of the big number of episodes of use of the big number of different media offers. This reduction is partly realised by focusing on the most relevant components (see above). Another analytical strategy to reduce complexity is based on the assumption that media users apply a small number of general principles that guide them in constructing their personal media repertoire. Here we can build on a large body of research, starting with the traditional distinction between different forms of audience activity (e.g. Levy/Windahl 1984): media users differ with regard to the degree of selectivity, involvement, and utility when they compose their repertoires; some apply strategies like instrumental or ritualised viewing (Rubin, 1984). Some might consider the consequences of their media use for their cultural capital (Bourdieu 1979/1997, Meyen 2008) and focus on quality media with a high prestige, others might focus on the hedonic functions of media.

Overall subjective sense of the media repertoire

The final assumption with regard to media repertoires is that they make sense to the user and that they have a practical meaning within their everyday lives (see below). This means that there should be systematic relations between the users' social context, their individual values and ambitions, and their everyday practices on the one hand and their patterns of media use on the other hand.

2.2 Theoretical considerations on the status of media repertoires

The concept of media repertoires has not been developed as a part of a coherent theoretical framework; instead it is the result of a conglomerate of theoretical considerations and empirical evidence. Its status is rather instrumental: it provides a conceptual instrument that helps to overcome the above-mentioned shortcomings of research on media use. Nevertheless, the concept can be positioned within a range of theoretical approaches (see Hasebrink & Popp, 2006).

According to our understanding, repertoires are the result of many single situations of selective behaviour; they are compositions of many media contacts, including a variety of different media and content. The Uses and Gratifications approach (e. g., Rosengren, Wenner, and Palmgreen, 1985) is the most prominent explanatory concept for selective media exposure. So far, the respective hypotheses and empirical evidence are usually applied to single aspects of media use and the respective gratifications sought and obtained, whereas it is left open to what extent different motives may interact with each other and lead to a pattern of exposure. One possibility for adapting the Uses and Gratifications ideas to a repertoire-oriented approach would be to analyse patterns of gratifications sought, i. e., to identify groups of media users on the basis of specific combinations of media related motives. According to Uses and Gratifications assumptions, these patterns of gratifications should lead to specific patterns of media use. A second possibility to open the approach to a repertoire-oriented approach would be to introduce a meta-level of gratifications sought, which are not related to specific media or content but to the aggregate level of an evening or a week or even more. These gratifications would refer to relational aspects, e. g. the diversity of media contacts. A strong motivation to use a diverse range of programmes would lead to the selection of an option which can be expected to be different from the previous selections. A strong motivation to compose a certain dramaturgy of a weekday evening, e. g., including some news, some action drama and some comedy, would lead to the selection of the option still missing in the repertoire, whereas the likelihood of those options which had already been selected before would be minimal.

However, even with an extension of Uses and Gratifications as outlined, a repertoire-oriented approach as we propose it needs further theoretical elaboration regarding the question of the social and psychological origins of needs which lead to the Uses and Gratifications mechanism. In addition, the important critique regarding the basic assumption of media users being able to reflect and rationally explain their choices seems to be particularly relevant when it comes to gratifications on the meta-level. Further approaches to selective media exposure are so far even more focused on single aspects of media use as dependent variables. Mood management research (Zillmann, 2000) focuses on concrete situations. In order to moderate their existing mood, people choose the most appropriate content from the range of options being available in this moment. In order to adapt this basic idea to a repertoire-oriented approach it would be necessary to develop assumptions regarding patterns of moods, for instance whether different moods are more

or less likely to be combined, or to what extent certain moods and the respective selective exposure have consequences for future situations.

Research on the influence of personal traits on media behaviour, e.g. sensation-seeking (Zuckermann, 1988) or need for cognition (Henning and Vorderer 2001) tries to explain stable inter-individual differences in media use. So far the respective dependent variables have been single variables indicating the absolute or relative amount of use of certain kinds of content (e.g. action or information oriented media supply). The respective ideas could be adapted to a repertoire-oriented approach by shifting the empirical approach from single variables (e.g. likelihood to select a specific kind of content) to patterns of selections (e. g. the degree of diversity or variability of the selected content).

The approaches to selective media use mentioned so far have in common that they are interested in concrete selective behaviours; i. e. they try to explain concrete choices of media content. Another type of research which is important for the development of a repertoire-oriented approach focuses on lifestyles or social milieus. Despite many conceptual differences, the common aim of the respective studies is to identify subgroups of the population whose members share certain patterns of behaviour. This kind of approach has become particularly important within market research as a tool to describe target groups. Some of these life style typologies or classifications of milieus are built on the basis of socio-demographic variables and indicators for general values and attitudes, whereas aspects of media use are just treated as descriptive indicators which provide the link between lifestyles and concrete media offers.

Another group of typologies include information on media use as defining variables. In his critical review of lifestyle research Karl Erik Rosengren (1995: 13) criticised a lack of systematic combinations of substantive theories, formal models and empirical data. As one step towards a more systematic approach to lifestyle oriented research, Rosengren proposed to deal "with the relations between, on the one hand, structural, positional and individual characteristics, and on the other, patterns of human action" (ibid.: 14). This approach seems to be a helpful step towards a pattern-oriented approach, which could help to integrate the afore-mentioned social and psychological origins of needs, which then leads to selective exposure as described by the Uses and Gratifications or the mood management approach. However, the concrete procedures of analysis as applied by Rosengren and his group do not actually assess patterns of actions. Instead, structural, positional and individual characteristics as independent variables are linked to single variables indicating a certain aspect of media use, e.g. the preference for a certain kind of music (ibid. 18). Again, we cannot learn about concrete combinations of actions, e.g. the fact that some people like several kinds of music whereas some people just like one. It also becomes obvious that this kind of question is difficult to conceptualize on the basis of the analytical distinction between structural, positional, and individual characteristics. The question which kinds of actions are combined into a comprehensive pattern of action requires an approach which integrates the analytically separated levels into a coherent model of action.

Here we can build on Weiß's (2000, 2001) approach to systematically describe the interrelation between the individual's media use and his/her societal position in a structured society. This approach refers to Bourdieu's (1979, 1997) concept of habitus as a collective, historically acquired system of ways to perceive and to think. It generates patterns of actions and evaluations and as such builds a link between societal position and lifestyle. According to this, media repertoires can be understood as integral part of lifestyles, and they have to be interpreted with regard to their practical meaning.

2.3 Methodological considerations

The concept of media repertoires contributes to bridging the conceptual and methodological gap between different threads of research on media use. The analytical framework outlined above helps to operationalise patterns of media use in different ways and to relate the respective findings. In our study on media repertoires in Germany we decided to combine two methodological approaches: a) qualitative forms of data collection among a selected sample of individuals in order to reconstruct the meaning of a particular media repertoire; b) standardised surveys that assess media-related behaviours on a representative basis.

The strengths of the standardised approach lie in the fact that large representative samples can be used in order to analyse the distribution of certain patterns of media use within the total population and within different social milieus. One of the weaknesses is that it is almost impossible to be consistent with the principle of a user-centred perspective: By definition standardised surveys pre-define the categories that are used to describe patterns of media use, e.g. by asking for specific types of media or for specific genres. Another weakness is the de-contextualized nature of responses on single items; they indicate an isolated aspect of the respondent's behaviours or attitudes but do not provide any clue of the meaning of this specific aspect. In order to deal with these weaknesses it needs appropriate analytical procedures that help to re-contextualise single items and to identify comprehensive patterns of media use including relational aspects between the components of these patterns.

The strengths and weaknesses of the qualitative approach are complementary to those of the quantitative approach. Qualitative research is open to learn about the users' perspective on their media repertoires and about the subjective meaning linked with certain behaviours. On the other hand of the very focus on the complexity of each individual case makes it difficult to come to general conclusions.

While it has become a kind of general saying that quantitative and qualitative research (should) complement each other, the actual and successful combination of these approaches is still quite rare. One condition for a productive interplay between them is the existence of a concept and an analytical framework that can be used for both approaches. In the following we will take the concept of media repertoires and the analytical framework as outlined in Table 1 as a basis for the development of a concerted research design that combines the potential of both approaches. In this project, the qualitative and quantitative

parts were not organised in a temporal order with one part building on the results of the other one. Instead we have worked on them in parallel. For this article we decided to present the qualitative part at first, because it covers the full framework outlined in the conceptual part, while the quantitative part only refers to some selected aspects.

3. Media repertoires as meaningful practices

The qualitative study was based on primary data and took an interpretive, sense-making approach to individual media repertoires. It not only asked about the shapes and the inner structures of repertoires, but also if and how the media repertoires make sense to the media user. Apart from acquiring detailed knowledge on individual media repertoires the qualitative study had two further objectives on a meta level: a) to learn more about what categories and methodologies are useful to explore trans-media pattern of media use, and b) to find out whether our basic assumption that media repertoires are more than the mere sum of their components can be empirically justified.

3.1 Research design

The pilot study to be presented here focused on a group of media users whose practices of media use were most likely to be affected by processes of media convergence. It consisted of five media users aged 20 to 30 with a higher level of formal education living in the city of Hamburg/Germany. We regard this rather homogeneous sample as a first pilot test within our wider researcher programme on media repertoires. The reason for selecting a rather homogeneous sample was so as not to be overwhelmed by the well-known clear differences between younger and older or between higher or lower educated respondents, but instead to investigate more subtle distinctions and inter-individual differences that occur even within one social milieu. As a consequence we cannot talk about the relevance of broader social contexts in this pilot study; this will be the focus of future steps.

In this pilot study we combined different methods of data collection: media diaries and qualitative interviews. This 'between-methods triangulation' (Flick1992) has been chosen in order to assess the rather behavioural and habitualised aspects of media use as well as the aspects related to attitudes towards and meanings of media use.

The participants were first asked to keep a semi-structured diary for one week about all their media activities. The respective template asked participants to answer the following questions for each episode of media use: 1) time and duration; 2) type of medium used (TV, radio, …); 3) concrete media product (programme, website, …); 4) concrete content/topic; 5) situational context; 6) additional notes, e.g. on motivation, mood, evaluation of the media product. The completed diary was used in the semi-structured interview, which touched upon all components of our analytical framework of media repertoires (see Table 1) and asked about the personal and social situation of the media user.

In order to facilitate speaking about the complex and often unconscious matters related to the description of media repertoires visual methods were included in the interviews. Figure 2 provides an example of the kind of data that we got from these steps.

- As a first step participants got a set of cards and were asked to write each of the main elements of their media repertoire on one of these cards. They were completely free how many cards they used and which media level they referred to. The participant documented in Figure 2 first wrote four cards (*laptop*, *TV set*, *radio*, *books*); when the interview went on she added a fifth card (*internet/web.de[1]/StudiVZ[2]*) and linked it with *laptop*, arguing that the new card indicates what she actually does with her laptop.

- As a second step participants got 20 tokens and were asked to distribute them among the – in the case of Figure 2, four – elements according to the relative time budget for each of the elements they had mentioned. This distribution has been registered in terms of percentages.

- As a third step participants were asked to place the cards on a large board with concentric circles with "Me" in the centre according to the personal relevance of the respective component of their media repertoire. The example in **Figure 2** shows the highest relevance for *internet/web.de/StudiVZ* followed by *books*, *TV set*, and *radio*. One important finding for this example is that the amount of use is not fully consistent with the perceived relevance; thus these indicators are conceptually as well as empirically distinct aspects of media repertoires.

- As a last step participants got another set of cards in a different colour and were asked to write down the main functions of the components they had mentioned or the roles that they play in their everyday lives.

In our study these visualisation methods were not used in order to produce visual data as an objective in its own. We did not regard the components written on the cards as the final description of the person's media repertoire, neither. The main function of these methods was to facilitate talking about media repertoires during the interview. While writing the cards, placing them on the board and attributing functions the participants kept talking and reflecting on their decisions. The main data for the analysis were the verbal comments (similar to think-aloud protocols), while the results of the visualisation methods were saved by taking photos and served as helpful additional indicator for the reconstruction of the respective media repertoire.

All the data collected were analysed by means of qualitative content analysis; we used MAXqda software to structure and code all materials and to analyse the data. For the analysis we applied the approach of thematic coding; this means that original data from all sources (media diary, interview, visual methods) were attributed to thematic categories; the main categories were based on the general analytical framework presented above. The coding procedure was open for new categories that were inductively derived on the basis of

the empirical data. Taking these categories each case has been analysed in detail on the individual level. For each category the relevant material was summarised and paraphrased. In a second step the five cases have been compared along the main categories. At this place we try just to summarise the results of this comparative step in order to give an idea of the kind of results that we have got with the methods applied.

Figure 2: Example for the visual reconstruction of a media repertoire
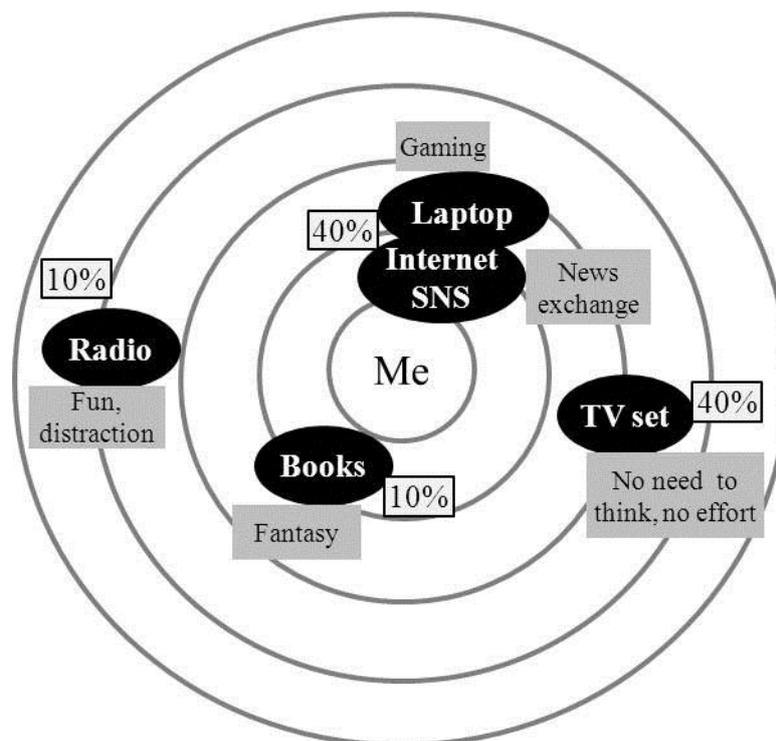
Note: The figure displays a summary and translation of the results of the four steps of visualisation by a selected participant of the study; the original steps have been documented by photos.

3.2 Key findings

Relevant components of media repertoires

When asked to name the media offers that best describe their regular patterns of media use, the respondents differ in the number of components and in the level of media use they refer to. While these differences might partly be due to differences in the respondents' strategies of self-presentation, we observed some substantial reasons for them. A low number of components as in the example shown in Figure 2 can reflect, as in this case, the general attitude that media should just serve as a means of distraction; this person defined the components on the most abstract level of media types or media equipment; these components are – as she puts it – used in a rather habitualised and non-selective way. The

reason for another respondent to name just a few components that build the media repertoire is a lack of time because of being fully occupied with work for university and several jobs; therefore the repertoire is focused on just a few concrete information sources, which are complemented by unspecific broad categories for entertainment and relaxation (*film*, *books*, and *music*). Other respondents' repertoires consist of 15 or even more components that cover a wide range of specific functions.

An interesting observation with regard to the components of media repertoires is that some participants mentioned specific social contexts as one component of their media repertoire, e.g. *media use together with others*, thus indicating that a part of the repertoire is not directly related to a specific medium, genre, or content but to a specific social function; sometimes the participants explicitly say that they do not really like the respective media offers, but nevertheless use them, because the social context is the relevant factor. Although, according to the media diaries as well as to respective comments during the interview, these situations may occur quite often, they are never mentioned as one of the most relevant components of one's media repertoire as indicated by writing it on one of the cards. This underlines the conceptual premise of our approach that media repertoires are located on the level of individual users; they are one element of the individual to express his or her individuality within the social contexts he or she inhabits.

Other components of media repertoires that are rather linked with social contexts than with concrete media are 'social media rituals', e.g. public events and meeting with friends in order to jointly play games, watch DVDs or listen to music. A final, increasingly important, component of people's media repertoires is media use in mobility; again the social context is the dominant characteristic of this part of the media repertoire.

Empirical indicators for the description of repertoires

With regard to the empirical indicators that are used to describe media repertories, concrete contacts with certain media, i.e. the frequency and duration of use, can be taken as a behavioural baseline; this may be partly a consequence of our research design that included the media diary as a first step, which was also taken as a starting point for the qualitative interview. Nevertheless, beyond this common denominator we found noticeable differences between the participants. One of them perceives her relations to the respective media mainly as habitualised practices that are closely interwoven with everyday routines; in contrast to this another participant talks about media use as part of leisure time, thus keeping it apart from the obligations of everyday life. Some participants describe their repertoires rather in terms of preferences (or sometimes as disliking) for certain kinds of media content. A general conclusion from these observations is that media repertoires cannot be understood just on the basis of the frequency and duration of use; other indicators such as the embeddedness into everyday routines or individual preferences for and attitudes towards certain kinds of media content are also highly important factors, sometimes even more important than the behavioural indicators.

Relations between the components of media repertoires

Two of the indicators for the relations between the components of media repertoires aim at ordinal rankings of the components; this is the case for the *proportion of use* and for the *relevance* of the components. The respondents expressed some difficulties with regard to these indicators, which led to interesting considerations about differences between 'objective time' and 'time as experienced', about situations of involved and non-involved media use or of parallel use of different media, and about the specific respect of personal relevance. These issues have been widely discussed in the critical literature on measuring media behaviours in terms of frequencies and minutes (e.g. Ang 1991); for our study these discussions helped us to understand the criteria that were used by the participants when they described their repertoires. In this sense these indicators proved to be relevant for the description of media repertoires; most of the participants were able to make qualified statements on these criteria and also to provide reasons why some components are more relevant to them than others. Even in the case of a participant who found it difficult to differentiate between the components along these criteria, this had a plausible background: with regard to the general principles guiding the composition of her media repertoire (see below) she emphasised the objective to monitor a broad and diverse spectrum of media content. As already mentioned above, the discrepancies between the two rankings are very informative, since they point to conflicting principles of media use (see below).

Diversity as a holistic indicator for the relations between the components of a repertoire also reflects relevant differences between the participants. While some of them describe a rather focused spectrum of media and a limited range of functions, others combine quite diverse kinds of media content. These differences are consistently observable both on the behavioural level that has been assessed by media diary and on the self-reflective level in the interview; participants explicitly mention that their media use is focused on a narrow spectrum or, in the opposite case, that they try to monitor a wide range of information sources.

Functional complementarity as an indicator for the relations between components of media repertoires has provided heterogeneous results. Some participants attributed highly specific functions to their components, thus emphasising a high degree of functional complementarity within their repertoire. Others only mentioned highly general functions such as information, entertainment, or relaxation that did not clearly differentiate between the components of the repertoire.

The indicator *compatibility/competition* refers to whether there are particularly close links between certain components of the repertoire or, to the opposite, rather competitive relations with the consequence that an increase of one component leads to a decrease of another component. The participants often mentioned competitive relations, e.g. between different print media: when they have a lot to read for university, they tend to read less newspapers and magazines; when they read more newspapers, they tend to read less books.

General principles guiding the composition of media repertoires

With respect to the overall construction principles of their media repertoires the participants referred to some basic media-related schemata. For instance one participant characterised her general media behaviours as rather unselective and dominated by low-prestige media, while another one emphasised avoiding any unselective media use. The distinction between high and low prestige media is mentioned by almost all participants; however they apply different strategies to deal with this issue. Some intentionally focus on high prestige media and avoid low prestige media; while others say they love to use certain media products although they somehow have bad feelings about this practice because of their low prestige. Closely related to this are further distinctions, e.g. between information and entertainment, between 'hard news' and 'soft news', between media for learning/working and media for leisure time. The salience of this evaluative dimension partly reflects the specific group we have analysed: the distinction between high and low quality media is a particular issue in higher educated groups, two of their relevant norms being a) to use a broad spectrum of quality media in order to be well informed about public affairs, and b) not to waste time by using 'just entertaining' media.

As a consequence of these evaluative and normative criteria, the participants reported having quite negative feelings about parts of their media repertoire, which were regarded as too time-consuming and sometimes even as addictive behaviour. Another consequence of these normative aspects is that some participants define clear rules regarding some kinds of media products that they would not include in their repertoire; sometimes these are tabloid newspapers or the entire yellow press, sometimes this includes even television as a whole.

Overall subjective sense of the media repertoire

At this place we cannot go too much into detail of the analyses regarding the personal 'life project' of the participants. In order to investigate our general assumption that media repertoires indicate meaningful practices that make sense within the current everyday life, we combined information about the participants' objective conditions and their individual ambitions and objectives with their media repertoires. The findings clearly support the assumption: media repertoires in all their aspects as they have been described before are closely interwoven with the social context and the individual lifestyle, i.e. the personal 'life project'. For instance:

- One participant told us he has to struggle with a lack of motivation to learn for university, accompanied by unclear perspectives for his future; he tries to overcome this crisis by trying to invest all his energy in learning and working for university. This structure is reflected in the way he deals with his media repertoire: against the background of a clear distinction between 'useful' and 'useless', 'relevant' and 'irrelevant' media, he tries to avoid using 'useless' media

and to focus on 'relevant' media. However he often slides into media that he regards as irrelevant and that distract him from learning. Interestingly this person explicitly mentions the process of convergence as a new challenge for his practices of media use, because it blurs his clear distinction between 'relevant' and 'irrelevant' media.

- Another participant, although still being a young student, has already got a good professional position that is linked with a promising career. She seems to successfully combine two worlds, the life of a young sociable student who enjoys the flexibility and light-heartedness of the student's milieu on the one hand and the life of a career-oriented professional. It is with a high degree of self-confidence that she describes her corresponding media repertoire, which includes a combination of 'girlie'-like television series on the one hand and regularly reading a subscribed quality newspaper and watching television news, particularly for information on politics, economy, and finance.

These examples underline how integrated media repertoires are into the practices that characterise the respective everyday life; both examples indicate a high correspondence between patterns of use and the social context. It may be assumed that there will also be cases whose repertoire is meant to be clearly distinct from the everyday experience in (unsatisfying) working contexts.

There is another general observation that supports our assumption that media repertoires as conceived here represent a meaningful pattern of practices: the participants easily spoke about their personal principles in combining their personal repertoires and particularly about the links between media use and the structures of their everyday life. Although it was not within the scope of this study we got plenty of hypotheses regarding changes of media repertoires as a consequence of changes of the social context: moving away from parents, starting a job, living together with a new partner, changes regarding the way between home and university or work – all these changes directly affect the composition of media repertoires.

4. Media repertoires as patterns of behaviour

In many cases, research on media use puts a strong focus on the behavioural aspect of media use. Particularly the media and advertising industry heavily relies on empirical indicators of how many users are reached by which kind of media content for how often and for how long. One objective of applying the repertoire-oriented approach to this kind of data is to use these rich resources for more theory-driven and substantial analyses.

The empirical basis of our analysis is the German study *Mass Communication*, that has been run every five years since 1964; we have used the respective surveys of the years 1980, 1985, 1990, 1995, 2000, 2005, and 2010. The surveys are based on representative samples of the German population (14+ years). The questionnaire includes a broad range of indicators for media use, e.g. the frequency and amount of use of television, radio,

newspaper, internet (since 2000), magazines, books, video/DVD, CD/records. In addition there are some items asking for evaluations and opinions regarding the respective media. Taking these data means that the level on which we investigate media repertoires is the level of types of media, and the empirical indicators we use are behavioural data on the frequency and duration of use of these media and some additional attitudinal data (see Table 1). At this point we present three steps of analyses that can serve as examples for different approaches to the analysis of media repertoires.

Describing relative proportions of media within people's time budget

The first and rather simple approach to an analysis of media repertoires is to take the proportion of time that is devoted to different media and to present the findings as trans-media time budget (see Figure 3). It has to be emphasised that by following this approach we expand the concept of media repertoires that originally refers to individual patterns of use to an aggregate level. We believe it is a strength of this concept that it can be applied to different levels of analysis. General descriptions like the time budget of the population or of certain groups can be used as indicators of the aggregate media repertoire of the population and of the relative importance of the single media that have been investigated.

Figure 3: Time budget for eight types of media in Germany 1980-2010 (in minutes per day)
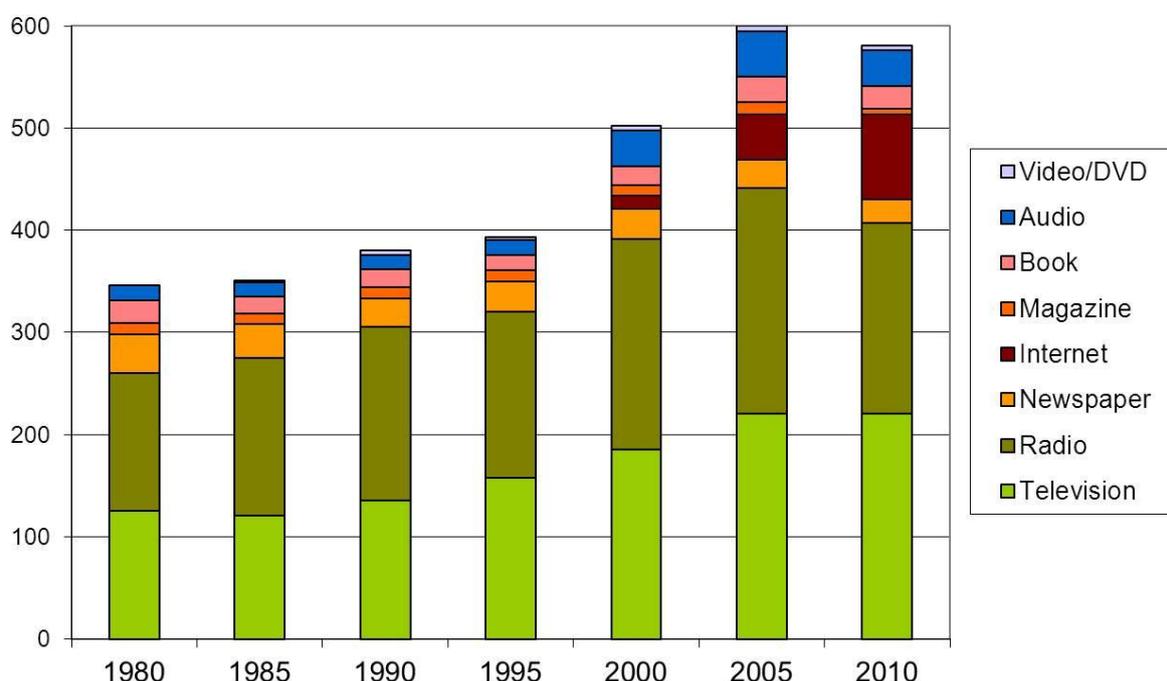
Note: Representative samples of the German population 14 years and older. 1980/1985: n=2,000; 1990/1995: n=6,000; 2000: n=5,017; 2005/2010: n=4,500. 1990 has been the first survey that included the area of the former GDR. Until 1995 data were collected by means of face-to-face interviews; since 2000 data are based on telephone interviews.

The findings indicate a substantial increase of the overall repertoire in terms of the time devoted to all media between 1980 and 2010 reaching a level of 9 to 10 hours per day in the years 2005 and 2010. As for the relative importance of single media Figure 3 shows that almost all media have increased the absolute duration of use except newspapers and magazines. In relative terms, the percentage of television has slightly increased (1980: 36%, 2010: 38%); starting with a first reliable measure of 3 per cent for the year 2000 the internet increased its share up to 14 per cent. The clearest decrease can be observed for newspapers (1980: 14%, 2010: 4%).

Investigating correlations between different media

While this kind of analysis is quite familiar, it is only a first step towards the description of media repertoires. A second approach to this kind of data is an analysis of the correlations between different kinds of media or content. When we calculate bivariate correlations between the amount of use of two media, e. g., television and internet, a negative coefficient would indicate a certain tension between these two media, i.e. they do not seem to fit to each other, and using one of them is at the expense of the other one; as a consequence there should be few people who combine heavy use of both media. This would be regarded as an indicator for the above-mentioned criterion of 'competitiveness' (see Table 1). A positive correlation between the frequencies of use of these two media would indicate that they are likely to be combined within media repertoires. Finally, a zero correlation between the two media would suggest that we can find any combination of them within different media repertoires. Thus, we regard the bivariate relations between different media or kinds of media content as one important indicator for media repertoires.

As an example of this kind of analysis, we take up the on-going discussion about how the increasing role of online media might affect the use of traditional media. The data provided by the above-mentioned study allow for the calculation of correlations between the frequencies of use of different media. Table 2 displays the extent to which the frequency of online use correlates with the frequency of use of seven other media in 2005. For the whole population the findings show that there are small but (due to the big sample size) highly significant negative correlations with television and newspapers and moderate positive correlations with listening to audio media and watching videos or DVDs. This finding could be read as follows: the more people use the internet, the less they watch television and newspapers – an interpretation quite in line with the public debate on the consequences of online media on traditional media. However, as detailed analyses for more specific groups demonstrate, this interpretation does not hold at the more particularised level. Within the group of adolescents the correlation between online and television is almost zero, and for newspapers there is a moderate and highly significant positive correlation. For young people these data say that the more they use the internet the more they read newspapers, which is clearly against common assumptions on the relationship between the internet and newspapers.

Table 2: Correlation between the frequency of online use and the frequency of use of other media in 2005 (Pearson correlation coefficients)

	Total population	Selected subgroups		
		Adolescents	Middle age, middle class	Pensioners
Respondents	*n=4,500*	*n=444*	*n=915*	*n=1,052*
Television	-.15	.02	-.03	.00
Radio	.00	.22	.02	.11
Newspaper	-.06	.22	.02	.09
Magazines	.03	.21	.09	.06
Books	.02	.06	.05	.11
CD/records	.20	-.03	.12	.13
Video/DVD	.33	.20	.15	.17

The lesson to be learnt from this empirical example is twofold: Firstly, the patterns of how people compose their media repertoire are more complex than often expected. Research on media use has to systematically analyse the relationships between different media as they are reflected by patterns of exposure. Secondly, it is crucial to consider the role of demographic and other contextual variables. At first glance there is a negative correlation between the internet and television. However, when we look at specific groups there isn't one to verify this finding. Thus the correlation for the total sample can be fully explained by social factors – in this case the fact that older people watch a lot of television and are less likely to use the internet compared with young people.

Identifying patterns of media use and types of media users

The basic idea of media repertoires obviously goes beyond the level of bivariate correlations between pairs of media. Media repertoires are conceived as comprehensive patterns of media use. Empirical approaches to the analysis of patterns are, for instance, configuration frequency analysis, or, most important in the field of lifestyle research, cluster analysis. The rationale of these approaches is to identify cases which share the same attributes and as such can be regarded as one cluster of media users that can be clearly distinguished from other clusters of media users with different attributes of media use. Thus, to identify clusters of media users on the basis of their overall pattern of media use is the third empirical approach of the proposed repertoire-oriented approach.

The rationale of this step has been the assumption that people's media repertoires differ with respect to the favourite medium; the survey used above included the respective variable, which was used as a categorical variable in a two-step cluster analysis together with eight variables indicating the frequency of use of eight media (see Table 3). Due to this procedure four of the five clusters are mainly characterised by one of the media as favourite; however the analysis also reveals significant differences between the clusters

with regard to the frequency variables indicating that the five repertoires differ with regard to the favourite medium as well as to the frequency of use of the other media. Cluster 1, for instance, includes users who say TV is their favourite medium and who watch TV more often than any other group; they combine this TV-oriented pattern with high frequencies for radio and VCR, and low frequencies for internet and particularly for books. Thus this repertoire is characterised by a clear preference for audio-visual content. Those who regard the internet as their favourite medium (Cluster 5) have quite a rich media repertoire with regard to all electronic media, while they are less frequent readers of newspapers. The only cluster that includes users with different favourite media (Cluster 2) is characterised by the lowest use of the traditional news media (TV, radio, and newspapers) and an above-average frequency of internet use. Compared to the other cluster with high internet use (Cluster 5, see above), this repertoire indicates a generally low interest in media.

These patterns of media use have been identified on the basis of commonalities and differences between individual users with regard to their patterns of media exposure. Building groups of media users with similar media repertoires and describing the aggregate indicators of these repertoires on the group level provides a substantial step forward in the direction of a research on media use that is conceptually closer to actual user practices as investigated by qualitative research. Survey data as they have been used in this case can be used for additional steps, e.g. for analysing the socio-demographic and individual characteristics as well as indicators for social contexts that explain who will belong to which group (for an analysis of this kind, based on logistical regression analysis, see Hasebrink 2012).

Table 3: Clusters indicating five media repertoires in Germany 2005

Cl.	%	Favourite Medium	TV	Radio	News-paper	Inter-net	Maga-zine	Book	Video	Audio
1	35	TV	++	+		-		--	+	-
2	10	Various	--	--	--	+	-			
3	11	Newspaper			++	-		++	-	-
4	24	Radio		++		-		-		
5	21	Internet	+	+	-	++			++	+

Source: *Massenkommunikation* 2005; n=4,500; result of a two-step cluster analysis with one categorical variable (favourite medium: TV or radio or newspaper or internet) and eight continuous variables (frequency of use of the eight media). +/-: higher/lower than average, $p<.05$; ++/--: higher lower than any other cluster, $p<.05$; empty cells indicate that there is no significant difference to the average.

5. Conclusion

In order to overcome two conceptual and empirical shortcomings of research on media use – the focus on single media approaches, and the gap between standardised audience research and qualitative reception studies – we have proposed the concept of media repertoires. It starts from the claim that media users combine a specific range of different media, genres and content and in doing so construct an overall pattern of use that makes sense to them. Starting from an analytical framework that identifies relevant categories for the description and understanding of media repertoires, we developed two methodological approaches to the analysis of current repertoires in Germany.

In the qualitative study with a small and homogeneous sample of five young adults with higher education we tried to cover the full range of our analytical framework and to follow the principle of an open and user-centred approach. This approach led to a rich body of empirical observations. On the overall level the findings support our basic hypothesis that the media repertoire of a person is a meaningful composition of different media content. These compositions are closely related to social contexts, and individual values and ambitions – thus we found noticeable differences between the five participants. Each individual media repertoire could be reduced to a few core principles that work across the different components and that make up trans-media patterns of media use and keep the repertoire stable over a certain period of time. These principles are, e.g., distraction, career orientation, sociability or avoiding silence, and media users are partly aware of them. When media users assemble their media repertoire, they do that on all different levels of media use described in our analytical framework; some components are described on the level of media types such as watching television or surfing the internet, while others are described on the level of a specific product, for example the favourite TV serial they do not want to miss, and yet others are described on the level of genre – many participants for instance say that music belongs to their media repertoire no matter if it comes from the radio, a CD, the internet or an mp3 player. Consequently categories often used in media use research such as media types are an important point of orientation, but not necessarily the major level of decision making when assembling a media repertoire. Similarly the aspect of mere media contacts is not as insightful as for example the embeddedness in everyday structures.

In all, the qualitative study provided detailed insights into a few individual media repertoires and analysed them as social practice. In order to overcome the above-mentioned gap we decided to also provide empirical evidence for the usefulness of a repertoire-oriented approach on the basis of standardised survey data on media use that we used for a reanalysis. This approach differs quite substantially from the qualitative approach: a) the components that build the media repertoires have been pre-defined; in this case respondents were asked how often they use certain media types; b) the answers on single items are rather decontextualized, there is no possibility for the respondent to relate them to each other; c) while the qualitative approach sets out to reconstruct individual cases the survey approach draws its main conclusions from distributions within the sample, from inter-individual commonalities and differences. The objective of our

combination of these methodological approaches was to use them as complements, i.e. to accomplish our understanding of media repertoires by new insights. In order to reach this, both methods were applied by starting from the same analytical framework.

The quantitative analyses demonstrated the usefulness of a repertoire-oriented approach. Analysing data on media use on the basis of trans-media time budgets is a first step towards overcoming the single-medium approach. The composition of these time budgets at different points of time or for different social groups provides valuable information about long term changes of repertoires and social factors influencing these repertoires. Survey data allow also for a systematic analysis of the competitive relationship between certain media within media repertoires. The respective analyses of bivariate correlations between types of media underlined the importance of taking the social context into consideration: often-quoted findings that internet use is negatively correlated with television use can be observed on the level of the total population; however this finding cannot be confirmed for any particular social group. As a third kind of analyses we finally identified some groups of media users who share similar media repertoires in terms of their favourite medium and the frequency of use for eight types of media. These groups, each characterised by a specific pattern of exposure across the media types that have been investigated provide a more informative picture of how people deal with converging media environment than analyses that are based on single indicators, e.g. for the frequency of using the internet or specific online services.

While we regard these two approaches to the analysis of media repertoires as highly informative, the repertoire-oriented approach has still to be elaborated, even in terms of the applied methods. The quantitative study showed that the rather rough categories of most standardised surveys on the frequency and duration of media use are not sufficient to appropriately describe distinct media repertoires. Consequently, there should be efforts to develop items that can be used in standardised surveys and allow for covering more aspects of media repertoires as shown in Table 1. One possible direction can be to use open questions that leave it open to the respondent, on which level he or she answers. For instance, in order to identify people's information related media repertoires Hasebrink and Schmidt (2012) asked respondents for "the three most relevant information sources" for their general information behaviour and to specific informational functions like getting news about one's own region. The respective data were coded with regard to the level of the answer, e.g. media type, genre, or concrete media brand.

The qualitative study on the other hand showed that media repertoires are observable and can be described; but it turned out to be helpful to reduce the complex analytical framework to a set of categories that seem to be most important. One possible way to tackle the complexity is to reduce the topical area and to apply the repertoire-oriented approach to specific topics or functions of media use.

Biographical notes:

Uwe Hasebrink is the director of the Hans Bredow Institute for Media Research and holds a professorship for Empirical Communication Research at the University of Hamburg. His research interests refer to practices of media use in converging media environments, the role of users in processes of media governance, and in children's and young people's media behaviours. E-mail: u.hasebrink@hans-bredow.institut.de.

Hanna Domeyer is a PhD student at the Graduate School Media and Communication at the University of Hamburg. Her research interests refer to patterns of transnational and transcultural communication, media use and constructions of audiences and communities, and media use in new media environments.

References:

Ang, M. I. (1991). *Desperately seeking the audience*. London: Routledge.

Bourdieu, P. (1979). *Entwurf einer Theorie der Praxis auf der ethnologischen Grundlage der kabylischen Gesellschaft* [*Outline of a theory of practice*]. Frankfurt/Main: Suhrkamp.

Bourdieu, P. (1997). *Sozialer Sinn: Kritik der theoretischen Vernunft* (2nd ed.) [*The logic of practice*]. Frankfurt/Main: Suhrkamp.

Flick, U. (1992). Triangulation Revisited: Strategy of Validation or Alternative? *Journal for the Theory of Social Behaviour* 22 (2), 175–197.

Hasebrink, U. (2012): Young Europeans' online environments: a typology of user practices. In S. Livingstone, L. Haddon, and A. Görzig (eds.), *Children, risk and safety online: Research and policy challenges in comparative perspective* (pp. 127-139). Bristol: Policy Press.

Hasebrink, U.; Popp, J. (2006). Media repertoires as a result of selective media use. A conceptual approach to the analysis of patterns of exposure. *Communications* 31 (3), 369-387.

Hasebrink, U.; Schmidt, J.-H. (2012). Informationsrepertoires der deutschen Bevölkerung [Information repertoires oft he German population]. Hamburg: Hans-Bredow-Institut [available at: http://www.hans-bredow-institut.de/webfm_send/657].

Henning, B.; Vorderer, P. (2001). Psychological escapism: Predicting the amount of television viewing by need for cognition. *Journal of Communication* 51 (1), 100-120.

Jensen, K. B.; Rosengren, K. E. (1990). Five Traditions in Search of the Audience. *European Journal of Communication* 5 (2-3), 207–238.

Levy, M.R.; Windahl, S. (1984). Audience activity and gratifications. A conceptual clarification and exploration. *Communication Research* 11 (1), 51-78.

Livingstone, S.; Das, R. (2009). The end of audiences? Theoretical echoes of reception amidst the uncertainties of use. Paper presented at *Transforming audiences* 2, 3-4 September 2009, University of Westminster (available at: http://eprints.lse.ac.uk/25116/)

Meyen, M. (2008). Media knowledge and media menus as cultural capital and distinctive features. *Journal of Media Research* 2, 19-26.

Napoli, P. M. (2011). *Audience evolution. New technologies and the transformation of media audiences*. New York: Columbia University Press.

Nightingale, V. (ed.) (2011). *The Handbook of Media Audience*. Oxford: Wiley.

Rosengren, K. E. (1995). Substantive theories and formal models - Bourdieu confronted. *European Journal of Communication* 10 (1), 7-40.

Rosengren, K. E.; Wenner, L. A.; Palmgreen, P. (eds.) (1985). *Media gratifications research: Current perspectives*. London: Sage.

Rubin, A. M. (1984). Ritualized and instrumental television viewing. *Journal of Communication* 34 (3), 67–77.

Webster, J. G., & Phalen, P. F. (1997). *The mass audience: Rediscovering the dominant model*. Mahwah, NJ: Lawrence Erlbaum.

Weiß, R. (2000). Praktischer Sinn: Soziale Identität und Fern-Sehen. Ein Konzept für die Analyse der Einbettung kulturellen Handelns in die Alltagswelt [Practical reason: social identity und watching television. A concept to analyze cultural actions in everyday life]. *Medien und Kommunikationswissenschaft*, 48 (1), 42-62.

Weiß, R. (2001). *Fern-Sehen im Alltag. Zur Sozialpsychologie der Medienrezeption* [*Watching television in everyday life. Socio-psychological aspects of media reception*]. Wiesbaden: Westdeutscher Verlag.

Zillmann, D. (2000). Mood management in the context of selective exposure theory. In M. E. Roloff (ed.), *Communication Yearbook* 23 (pp. 103-123). Thousand Oaks, CA: Sage.

Zuckerman, M. (1988). Behavior and biology: Research on sensation seeking and reactions to the media. In L. Donohew, H. E. Sypher and E. T. Higgins (eds.), *Communication, social cognition, and affect* (pp. 173-194). Hillsdale, NJ: Erlbaum.

Notes:

[1] German e-mail provider.

[2] German social networking site.