Media effects, interpersonal communication and beyond: An experimental approach to study conversations about the media and their role in news reception

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Abstract: The paper aims at discussing the challenges and opportunities of laboratory experiments for communication studies. An experimental approach to research on TV news effects is presented. It focuses on interpersonal communication about a newscast and simulates the social context of media use and media effects. Based upon two research domains, (1) The role of interpersonal communication in media effects and (2) TV news reception, five hypotheses are derived which are tested in an innovative experimental design integrating survey and observation methods in a combination of media effects study and small group experiment. The influence of conversations on news memory and evaluation is assessed by treating conversations as independent variable in the experiment. In a video observation, the mechanisms of interpersonal communication about the media are identified. A moderating influence of conversations, specifically an enhanced news recall, is revealed. Additionally, the characteristics of the social processing of the media content can be described and applied as possible explanations for the effects of the experimental treatment. Consequently, the advantages of integrative research designs are explicated.

Keywords: media effects, interpersonal communication, TV news, laboratory experiment, observation

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Impact médiatique et communication interpersonnelle: une approche expérimentale de l'analyse des conversations dans les médias et leur rôle dans la réception d'informations

Résumé: Ce travail expose les défis et les opportunités que suscitent les expériences menées en laboratoire dans les sciences de la communication. L'étude expérimentale présentée se penche sur l'impact des informations télévisées et se concentre sur la communication interpersonnelle par l'intermédiaire d'un reportage du JT. On simule ainsi le contexte social de l'utilisation et de l'impact des médias. En se fondant sur deux axes de recherche, (1) le rôle de la communication interpersonnelle dans l'impact des médias et (2) la recherche sur la réception des informations, cinq hypothèses sont formulées. Celles-ci sont testées à l'aide d'une nouvelle méthode expérimentale : en combinant l'étude de l'impact des médias et une expérience en petits groupes, on associe les méthodes d'observation et d'interrogation. On mesure l'influence des conversations sur le souvenir et l'évaluation de l'information en considérant les conversations comme une variable indépendante. Dans une observation vidéo, les mécanismes de la communication interpersonnelle sont identifiés via les médias. Il en résulte une influence modératrice des conversations sur la mémorisation des informations. En outre, les caractéristiques du traitement social des contenus médiatiques peuvent être décrits et mis à contribution comme des explications potentielles pour l'influence de la manipulation expérimentale. Pour conclure sont présentés les avantages des mécanismes de recherche intégrés.

Mots clés: impact des médias, communication interpersonnelle, informations télévisées, méthode expérimentale en laboratoire, observation vidéo

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1. Background: Experimental approaches and communication studies

Experimental studies have been coming to terms recently in communication research. However, there has been a strong tradition of experimental work in some sub-disciplines of the field, mainly in research on media effects. The YALE attitude change program by Hovland and his colleagues (Hovland, Janis, & Kelley, 1953) can be certainly considered to be one of the most classical and well-known examples. The basic idea behind these studies was to explore the persuasive power of all kinds of features that mass mediated messages can obtain. Messages were varied in the characteristics of their communicators, their argumentation and technical features and were presented to different target groups in order to specify how efficient they could change the audience's attitudes towards the subjects covered.

This concept has been heavily criticized for being too artificial and too simplistic for the complex process of mass communication. Nevertheless, the basic idea of

presenting mediated messages with different characteristics to recipients in order to measure their effects and to compare them between different experimental conditions has survived up to now. One of the major advantages remains the high situational control that allows for clear cause and effect conclusions. Another one is the idea from general psychology that there are indeed many human processes which can be generalized from small and specific samples in the laboratory because they are so universal for human nature that they apply to a large part of the population – as long as all other characteristics are equally distributed in all experimental and control groups (Wimmer, & Dominick, 2003). Although this may hold true specifically for such general processes like cognition, motivation or emotion, an equivalent assumption has also been suggested for the communicative routines of everyday life which are often strongly habitualised (Edwards, & Middleton, 1986; Schwarz, 1998).

Against this background, the study at hand applied a classical experimental design used in research on media effects but extended it by also looking at the second step of media selectivity: interpersonal communication about media input. In this manner, the paper aims at showing that laboratory studies and the consideration of social context variables do not necessarily contradict each other.

2. Theoretical context

2.1. *Research on the role of interpersonal communication for media effects*

Since the 'Erie County Study' we know that ideas from the mass media are retold and newly reflected in inter-personal contexts (Lazarsfeld, Berelson, & Gaudet, 1944). Recipients talk quite often about topics presented in the mass media (Gehrau, & Görtz, 2010; Greenberg, 1975), especially with friends and family (De Boer, & Velthuijsen, 2001; Wyatt, Katz, & Kim, 2000). Interpersonal communication serves a bridging function in the agenda setting process as it affects salience perceptions (Nguyen Vu, & Gehrau, 2010; Weaver, Zhu, & Willnat, 1992). Uses and gratifications research reveals the conversation motive as one reason to turn to mass media: Recipients tend to use the media for the core reason of being able to converse with other people about it (Levy, & Windahl, 1984). Media contents are repeatedly mentioned in interpersonal encounters after media use as they are helpful to initiate conversations, to teach others about certain facts, to persuade conversation partners, and to validate one's own impressions and views in everyday life communication (Greenberg, 1975; Kepplinger, & Martin, 1986). According to Krotz (2001) media reception needs to be explored within the communicative context of everyday life. If people talk about their media experiences these conversations influence all later reception processes. Field studies investigating family discussions about the media emphasize the important function of interpersonal communication during and after media consumption in order to construct social meaning (Holly, Püschel, & Bergmann, 2001; Keppler, 1994). Along with this reasoning, Eliasoph (1998) suggests

that interpersonal discussion becomes increasingly important as it is necessary to make sense of all the complex mass-mediated information pieces that need to be processed and understood every day.

Consequently, communication research asks for the impact of interpersonal communication on media effects (Eveland, 2004; Price, Nir, & Cappella, 2006). Specifically, studies focus on the question whether conversation enhances or weakens the effects of mass mediated messages (Druckman, & Nelson, 2003; Lenart, 1994). Agenda setting studies provide evidence for both directions of influence (Nguyen Vu, & Gehrau, 2010; Yang, & Stone, 2003). However, they do not clarify the conditions of an either enhancing or weakening impact. An experimental framing study indicates that conversations about the news attenuate the effects of news frames (Druckman, & Nelson, 2003). Similar results are yielded by diverse studies on conversations about different kinds of media campaigns: Normative and persuasive influences of talk reduce the initial media effect (Kelly, & Edwards, 1992; Price, Nir, & Cappella, 2006). In contrast, there is a long tradition of research on group polarization, conformity and the spiral of silence suggesting an enhancing and reinforcing impact of conversations on media effects (Binder, Dalrymple, Brossard, & Scheufele, 2009; Noelle-Neumann, 1974). People who talk about political issues from the news perform significantly better in recalling the news contents compared to non-talkers (Robinson, & Levy, 1986a; Scheufele, 2000, 2002). Interpersonal discussions obviously support news comprehension which leads to a deeper understanding and better memory of news issues. Detailed examinations demonstrate that (1) the mental effort of news processing as well as (2) an integrative discussion including news contents from different sources as well as other pieces of knowledge in conversations are reliable predictors of political knowledge (Eveland, 2004; Kwak, Williams, Wang, & Lee, 2005). However, apart from very few exceptions (Druckman, & Nelson, 2003, Lenart, 1994); the studies referred to are cross-sectional survey investigations that find relations between variables without allowing for clear-cut cause-and-effects-explanations. Moreover, there are very few systematic studies which focus on the *process* of interpersonal communication about the media and explore the role of personal conversations in the course of media reception in depth. Hypotheses and results are contradictory indicating that there are still variables and conditions that need to be considered and explicated (see Gehrau, Döveling, Sommer, & Dunlop, in press). This seems to be specifically relevant if we look at the complex mechanisms of social interaction that have been explored in social psychological studies.

Social interaction in small groups has its own rules and dynamics that lead to advantages as well as flaws in decision making and opinion formation. Especially peer groups which usually discuss political issues exert informational as well as normative influence due to the needs for mastery and connectedness (Smith, & Mackie, 2000). These are responsible for processes of persuasion as well as conformity which may change individual opinions and judgments (Kaplan, & Miller, 1987).

Mutual enhancement motives (Wittenbaum, Hubbell, & Zuckerman, 1999) and conformity pressure drive people to talk about well-known issues repeatedly (Sommer, Fretwurst, Sommer, & Gehrau, 2012), thereby neglecting new facts. Moreover, groups often adopt more extreme positions than individuals for these reasons (Binder et al., 2009). These biases may result in wrong decisions or incomplete judgments. On the other hand, people can benefit from social interaction and comparison processes with their peers because they open new perspectives and facilitate memory processes (Gehrau et al., in press; Hirst, & Echterhoff, 2008). These ideas have been similarly discussed by political communication scholars who have asked for the characteristics of truly deliberate political talk (see Scheufele, 2000, 2002).

2.2. *Research on TV news reception*

Classical studies on TV news reception usually assume a clear cause-and-effect relation which has been studied by experimental or quasi-experimental examinations in the laboratory or in the field. News memory has been conceptualized as the standard dependent variable in these investigations: recipients were asked to remember what they had seen and heard and either answered more or less standardized questions about the news or retold the broadcast unaided (Giegler, & Ruhrmann, 1990). The respective studies show that recipients tend to remember quite poorly what they have received before: They abbreviate and simplify the contents covered, perceive and process selectively and heuristically (Gunter, 1987). Specifically factors like previous knowledge, personal interests and relevance but also particular socio-demographic variables like education have turned out to be the major influencing forces for news memory (Brosius, 1995; Giegler, & Ruhrmann, 1990, Graber, 1988). Thus, TV news that were initially supposed to be the "main source" (Robinson, & Levy, 1986b) for political information of the average citizen turned out to be the source of a "poor reception" instead (Gunter, 1987).

However, several specific studies have indicated that particular features of news coverage but also the activation, attention and processing capacity of the recipients play a major role for news reception (Berry, & Brosius, 1991; Brosius, 1989). Beyond that, some authors draw relations from news diffusion to the theory of news values. The selective processes leading to interpersonal talk about specific types of news are assumed to be similar to journalists' and recipients' selection processes due to news factors[1] and values (Deutschman, & Danielson, 1960). Thus, the classical studies presenting a news report and subsequently asking for the audience's memory may be too simplified to really identify the effects TV news may unfold. Indeed, qualitative explorations of news reception like group discussions (Robinson, & Sahin, 1984), in-depth-interviews (Graber, 1988) or studies using different techniques

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[1] News factors are conceptualized as specific features ascribed to news events by journalists. They are supposed to guide journalistic news selection by determining the perceived news value and thereby the decision to publish news (Galtung, & Ruge, 1965).

of protocol analysis (Schaap, 2001) revealed a more complex picture of the way people process the news. Specifically, it turned out that the *verbalization* of the news contents in social interaction supported news memory and that the subjective contextualization of the coverage was the crucial process in understanding and internalizing news information.

2.3. *Hypotheses*

Concluding from these thoughts and findings, five hypotheses are derived:
H1: Conversation enhances news memory.
H2: Conversation influences the evaluation of the news subject.

Both hypotheses are quite reasonable considering former research findings. In particular, many survey studies indicate that political talk usually goes along with higher frequencies of news media use and a greater political knowledge (see De Boer, & Velthuijsen, 2001; Scheufele, 2000, 2002). This is explained by processes of elaboration and contextualization in interpersonal communication (Eveland, 2004; Kwak et al., 2005). However, these results were yielded by cross-sectional survey studies which can of course show manifold relationships between the variables assessed but cannot isolate causal effects. Accordingly, an experimental design that specifically compares news memory with and without previous conversation is well-suited to validate and confirm these findings in a controlled setting.

For *H2* there is some experimental evidence showing contradictory findings: Whereas a framing experiment finds an attenuating influence of conversations on media effects (Druckman, & Nelson, 2003), experimental studies on the perception of political candidates and their programs show that the influence of conversations on media effects depends on the type of conversation constellation and varies with its heterogeneity (Lenart, 1994). Furthermore, the long tradition of research on group dynamics, conformity pressure and polarization suggests an influence of conversations towards more extreme positions (Noelle-Neumann, 1974) – an assumption that also finds empirical evidence (Binder et al., 2009). Thus, more specific research in controlled settings is needed to clarify this question.

Three further hypotheses directly dealt with the character of the conversations:

H3: Conversations are highly selective and related to characteristics of the news.

H4: The selective mechanisms in the conversations differ from those in individual recall.

H5: In conversations, social meaning is negotiated.

These three hypotheses are based on the one hand on qualitative observation studies examining family communication while watching television together (Holly et al., 2001; Keppler, 1994). On the other hand, they are grounded in quasi-experimental findings on news reception which detected heuristic and schematic ways of processing the news in a subjective way but oriented by general selective structures like news values (Graber, 1988; Robinson, & Sahin, 1984).

3. Methodology: rationale of the research design

The basic assumption underlying this study is that the information processing mechanisms after television news reception can be made accessible by observing conversations about the news. For this purpose, recipients are examined individually but in addition their conversations with peers become the subject of investigation. Like in the studies of group dynamics, social groups are consequently chosen as unit of analysis. Such an approach has been demanded by communication researchers already: Rogers (1973) criticizes the exclusively individual measurement of media effects and calls for the interpersonal communication system as unit of analysis. Greenberg (1975) ties in with this thought and defines conversations as the primary units when investigating processes of personal influence.

In the context of agenda setting research Brosius and Weimann (1996) allude to the fact that the individual level and the level of interpersonal networks are often neglected when examining media effects. This is specifically relevant as Rössler (1997) states that interpersonal communication may serve as an *operationalization* of agenda setting effects. More generally, Southwell and Yzer (2007) conceptualize interpersonal communication as an *outcome variable* of media effects. Consequently, Eveland (2004) demands for a more intensive consideration of interpersonal communication in the investigation of media effects in order to find clearer interpretations of the many contradictory results (see section 2.1.). However, integrative studies on interpersonal communication about the media and media effects are still quite rare.

Social psychological research on small group dynamics examines processes of interpersonal influence, persuasion mechanisms as well as mutual affirmation and enhancement. These processes are of outstanding importance for the social sciences as they affect individual opinions and attitudes, knowledge, emotion and action. Consequently, such phenomena are equally studied by media effects research: How do mediated messages determine and possibly change opinions, attitudes, knowledge, emotion and action? Thus, results of small group research may be useful to consider when investigating the effects of conversations about the media on classical media effects. In addition, small group research can be fruitful to consider for media effects research also methodologically. Studies on group dynamics focus on the group as unit of analysis (Hinsz, Tindale, & Vollrath, 1997; Kenny, 1996;

Weingart, 1997). These groups are usually studied in laboratory settings which allow for comparisons of different experimental conditions in a controlled environment (Kaplan, & Miller, 1987; Lenart, 1994). For example, group and individual performances and judgments are compared to each other experimentally (Laughlin, Bonner, & Miner, 2002; Pavitt, 2003). Moreover, communication processes in the groups are often observed and specific features of the interactions are coded (Hollingshead, 1998; Kraut, Lewis, & Swezey, 1982; Stewart, & Stasser, 1998; Wittenbaum et al., 1999). One of the classical procedures to analyse small group interactions is the coding scheme by Bales (1972): It allows for a classification of different socio-emotional behavioural patterns in the course of group communication. If differences between groups and individuals occur in the experiment, the analysis of group communication processes enables us to explain these differences by specific features of the group interaction. Moreover, in media effects research, data from the group conversation may be related to the media stimuli presented in the study.

Studies on interpersonal communication about the media and its influence on media effects are still comparatively rare in communication research. But even if this influence is studied, it is rarely related to the conversations with their contents and features. In order to do so, the above-mentioned study settings and designs from small group research may be applied to the study of media effects in a fruitful way: Media reception followed by interpersonal communication in a group can be experimentally compared to media reception without group interaction. Furthermore, group communication processes about the media can be observed in the laboratory under controlled conditions and compared to one another. Such a laboratory observation could also serve as a validation for results yielded in field observations of group interactions about the media. Consequently, this experimental combination of different methods in a laboratory setting permits to directly connect the characteristics and the effects of conversations about the media in one investigation.

However, the experimental approaches of small group psychology discussed above have their specific flaws that need to be taken into consideration. Group dynamics are usually simulated in a quite artificial fashion. The groups employed as units of analysis are mostly composed arbitrarily from unacquainted individuals right before the experiment (Kaplan, & Miller, 1987; Laughlin, Gonzalez, & Sommer, 2003; Stasser, & Stewart, 1992). But even if natural groups like intimate couples are invited to the laboratory (Hollingshead, 1998; Wegner, Raymond, & Erber, 1991), the tasks they need to fulfil and the issues to be talked about during the study are arbitrary as well: Groups learn lists of words by heart (Hollingshead, 1998; Wegner et al., 1991), estimate quantities from geographic almanacs (Bonner, Gonzalez, & Sommer, 2004; Laughlin et al., 2003) or solve mathematical problems (Laughlin et al., 2002). Politically or socially relevant topics are usually not dealt with. This, however, seems to be quite crucial. If people frequently talk about relevant topics from the mass media in their peer group und these conversations are determined by processes of normative and informational influence, these interac-

tions will certainly affect the individual judgments, attitudes and knowledge of all group members. Thus, we can expect that conversations about the media *DO* influence media effects and vice versa (Lenart, 1994). Consequently, an investigation of group dynamics in conversations about the media should be beneficial for media effects research. Additionally, the artificial settings and findings of small group research could be validated and tested in the more natural context of peer conversations about the media. Hence, the specific and narrow results of social psychological experiments can be evaluated anew within the frame of public communication.

Against this background the study at hand is a laboratory experiment with experimental group and control group. Interpersonal communication is manipulated as independent variable. In the experimental condition, dyads are discussing a news report after television reception. These conversations are videotaped and later on transliterated and analysed. In the control group, participants watch the news report individually and do not discuss it afterwards. This setting pursues three important objectives:

(1)   Research has shown that the usual recall and recognition tests do not adequately represent the process of TV reception (Dahlgren, 1988). By verbalizing thoughts and evaluations about the news report in the conversation participants allow us to follow their internal processes of media reception as well as the negotiation of meaning. Such a strategy is comparable to methods like the think-aloud or the thought-listing technique (Schaap, 2001). However, the observation of peer conversations has the advantage of being a more natural process of social interaction between two people familiar with one another. Such a conversation happens very frequently and regularly outside the laboratory and is thus a habitual routine for most people (Edwards, & Middleton, 1986).

(2)   The interpersonal communication setting simulates a specific extract of the social context media reception is usually embedded in. Hence, the conversation is understood as an effect of the previous media reception and can be examined as an outcome variable with its own specific characteristics (Southwell, & Yzer, 2007). This conception is comparable to qualitative field studies which observed family conversations while watching television. Using a standardized laboratory setting enables us to obtain quantitative results that can be related to the qualitative findings by triangulation (Denzin, 1989).

(3)   The experimental-control-group-design permits to compare the two conditions in their media effects and to explain the potential differences caused by the experimental treatment (= interpersonal communication). Specifically, we can ask for differences in memory, evaluations and attitudes with and without conversation about the news topic. In this way, we can draw direct conclusions from the experimental manipulation to the influence of interpersonal communication on the different dimensions of media effects. The specific laboratory setting allows for a high

situational control and the exclusion of potential interfering variables. Thus, we can produce a highly standardized context of investigation where a few variables can be systematically analysed in a larger sample.

In consequence, research on media effects and small group research are connected with each other in this specific experimental design. Interpersonal communication serves as independent variable in the first place aiming at identifying its influence on the classical media effects-dimensions. In a second step it is conceptualized as dependent variable which is analysed itself in its characteristics. These characteristics, in turn, may be helpful for a more detailed explanation of the influence interpersonal communication exerts in the process of media reception and effects. Such an approach is quite new in communication studies. Therefore, it needs to stay exploratory. However, it will open new perspectives on experimental designs in the study of media effects and offers the chance to validate findings from (qualitative) field studies in this area.

4. Methods: implementation

4.1. *Participants and sample*

The study was conducted at an Eastern German university and used a convenience sample of n=120 young people who were mainly university students. They were recruited via personal contacts and in different classes on communication studies and invited to come to the laboratory. All participants took part in a competition for a couple of cinema tickets as an incentive. As interpersonal talk about the media mainly occurs in primary group settings, participants were asked to take part in the study together with a peer person (friend, roommate, partner, or classmate).

Due to the student population the sample was fairly young with a mean age of 23.2 years ($SD = 3.21$). About 63 % of the participants were female. Participants in the experimental group were asked for their relationship status to the peer person who accompanied them. In most of the cases they reported to have a "friendship" with their conversation partner. The second frequent category was an intimate relationship. All other types of relationship were very rare. Generally, this indicates that the participants were quite familiar and close with their counterparts in the dyad. On average, conversation partners reported to know one another for 38.4 months ($SD = 45.3$). However, as the standard deviation shows, there was a very broad range from several years (20 in one case) to only a few months (less than 3).

4.2. *Procedure*

The experiment took place in a group laboratory. Participants were seated at a round table in a room that contained pre-installed cameras and microphones in every

corner. The room was separated by a one-way-mirror from a smaller room where the recording equipment was located. From there, cameras and microphones were operated and the experimental procedure was supervised by the experimenters. Participants were informed that they would be presented a television news excerpt and would then be asked to solve different related tasks. They were not prepared to the conversation or to any memory task before. However, it was explained to them that parts of the study would be videotaped. Written consent of all participants was obtained accompanied by the hint that they could decide to finish their participation at any time without an explanation. All participants agreed upon the conditions and nobody finished his or her participation earlier.

The dyads were randomly assigned either to the experimental or the control group. In the beginning, the news report was presented to all participants. Peers in the experimental group (= 40 dyads, e.g. 80 individuals) stayed together for the whole experiment. They watched the news report on TV together but were asked not to talk during reception. Peers in the control group (= 40 individuals) were separated and watched the report individually. After the news reception all participants solved a word puzzle to distract them from the news content. Individuals in the control condition solved it by themselves, whereas the dyads in the experimental group were asked to cooperate. This cooperation served as warm up phase to set up a comfortable atmosphere for social interaction. As the puzzle was quite complicated, all participants were very involved. Thus, it can be suspected that nobody still thought much about the news report or tried to memorize it. Moreover, we assumed that participants did not think ahead about what to expect in the course of the experiment.

After the distraction task, the dyads in the experimental group were asked to think back to the news report and to engage in an informal conversation about it. They were encouraged to behave naturally and to choose any possible direction of the discussion as long as it started off with the news report. Conversations were videotaped and transliterated in order to analyse their content and process features (see section 4.4. for details). The instruction initiated discussions that referred to the news report in the beginning but then quite quickly developed their own specific dynamics. Moreover, after one to two minutes participants tended to forget the cameras and acted quite freely and naturally. After about 10 minutes, the conversations were stopped by the experimenter. Most of the discussions had come to a considerable amount of turn-takes and issues dealt with. If the conversation had come to silence some seconds before it was stopped a little bit earlier, if the discussion was still very lively, the experimenter waited for some more seconds before closing the scene. In general, 10 minutes turned out to be a reasonable amount of time for the conversations. The average duration of all 40 conversations observed was 595 seconds ($SD = 115$).

Later on, all participants were asked to retell the news individually to the experimenter without any further interaction. This recall was audiotaped and analysed (see section 4.4. for details). Furthermore all participants filled in a questionnaire individually asking for their written recognition and evaluation of the news as well as for attitudes towards the news subject which was the integration of religious minorities in Germany (see next section for details), their media use and their socio-demographic data.

When data collection was complete, participants had the opportunity to ask any questions they had about the study. Participants were asked not to talk about the detailed structure and content of the study to their co-students as those might be future participants. They were thanked, thoroughly debriefed and dismissed. After the completion of the investigation a short report on the major results of the study was sent to all participants who had been interested in it and the cinema tickets were assigned to the three dyads/persons who had performed best in the word puzzle.

4.3. *Materials*

All participants watched a single news report broadcasted by one of the two large public service television stations in Germany (ZDF – Zweites Deutsches Fernsehen). A well-defined stimulus was necessary to ensure that aspects from the report that were mentioned in the conversations and in free recall could easily be identified and differentiated from participants' background knowledge. For this reason one specific news report had been selected.

The report dealt with the sixth nationwide open day in German mosques. The event was covered by showing the activities in the largest mosque in Berlin. In this context, the continuous discussion about potentially banning the Muslim headscarf in public service was picked as a central theme. Six persons were interviewed and asked for their opinions towards the headscarf: four German citizens who visited the mosque, a Muslim clergyman as well as a young Muslim woman wearing a headscarf herself. The news report contained a moderate level of conflict (pro and contra arguments) and high personalisation (four citizens as well as two people 'affected' were portrayed and interviewed). Its topic had a high continuity as it had been part of the public discourse in Germany for several years by the time the study was conducted. We selected the news report from a sample of news about immigration in Germany that had been collected and analysed in a different study on the depiction of migration issues in TV news (Sommer, & Ruhrmann, 2010). The selected news report was a typical report from one cluster in this sample and represented a type of coverage with moderate to high journalistic attention (see also Sommer, 2010 for details).

4.4. *Measures*

Experiments are not methods of data collection but specific settings of investigations (Brosius, & Koschel, 2003). Data was collected in this study by *survey* and *observation*. All instruments of measurement are described below (see also Gehrau et al., in press and Sommer, 2010 for further details):

In both groups *recall* and *recognition* of the news report were measured. Although both measures assess memory, media effects research highlights differences in the underlying processes of these outcomes. Whereas free recall indicates higher mental effort and the integration of information into existing knowledge structures, recognition relies on the accurate factual identification of certain features and details from the stimulus (Shoemaker, Schooler, & Danielson, 1989). Free recall was assessed by oral interviews and audiotaped. The news excerpt contained 29 informational categories based upon the journalistic 'W-questions': Informational units were categorized according to the basic journalistic W-questions "*Who? What? Why? When?* and *Where?* The person-category (Who?) contained nine informational units, the event-category (What?) as well as the explanation-category (Why?) each encompassed seven units, and the time and place categories (When? Where?) each included three units. Each category was coded dichotomously by indicating whether it had been mentioned in the interview or not. The sum of all information categories remembered served as recall measure. The material was coded by two independent coders with satisfying reliability (Cohen's kappa ranging from .67 to .96). Coder disagreement was discussed until a conjoint decision was reached. Recognition was assessed by a post-task questionnaire including five multiple choice questions about facts from the news report. In total, eight correct answers could be yielded in the recognition test.

Attitudes towards the news subject – the integration of religious minorities in Germany – were assessed by eleven items which were all taken from a database containing scales from large public opinion surveys in Germany. Specifically, they measured the exclusion of minorities (three items), costs of immigration (three items), consequences of immigration (three items) and xenophobia (two items). Evaluations of the news report were measured by means of eight adjective pairs describing the characteristics of the message. All items were measured using 5-point Likert scales.

Conversations were videotaped and verbally transcribed. Nonverbal communication was not transliterated, except from gestures like nodding which were necessary to understand the verbal conversation. Transcripts were coded for the same 29 informational categories which were assessed for free recall (see above). The *news factors conflict* and *continuity* were each coded as to whether they were mentioned in recall and/or conversation or not. *Personalisation* was coded by counting the amount of persons/actors referred to.

Additionally, conversation characteristics were assessed in order to explain the potential differences between experimental conditions. These were: evaluations, references to other media contents, references to everyday life, meta-communication, questions about information/facts (plus answers), questions about opinions/judgments (plus answers), humour.

The unit of analysis for this coding was the dyad. Thus, each conversation was treated as an entity and coded only once for each piece of information and each conversation characteristic no matter how often the single unit had been mentioned and by whom. Conversation contents were matched with free recall data for comparison.

5. Results

5.1. *H1 and H2: comparisons between experimental and control group*

In order to test hypotheses 1 and 2 the standard procedure of data analysis in experiments was conducted: means of the different media effects dimensions (memory, evaluations, and attitudes) were compared between the experimental group and the control group by a univariate analysis of variance. This calculation indicated a stronger and more accurate recall memory of the news in the experimental group, supporting *H1*. Participants in the experimental group reproduced significantly more information from the news report under free recall conditions ($M = 9.90$, $SD = 3.72$) than participants from the control group ($M = 8.53$, $SD = 3.39$) ($F(1,118) = 3.850$; $p = .05$). The mean amount of correct answers in the recognition test was slightly higher in the experimental group ($M = 6.80$, $SD = .89$) than in the control condition ($M = 6.58$, $SD = .98$). However, this difference was not significant ($F(1,118) = 1.584$; $p = .21$). Thus, although participants can freely retell more about the news report after a conversation, they remember particular facts from the message in a quality that is comparable to the control group. This finding indicates that interpersonal communication may exert a stronger influence on the *elaboration* of news information than on the pure rehearsal of facts from the news. However, the non-significant difference for recognition could also be ascribed to a ceiling effect as the mean values in both groups are fairly high (6.8 and 6.6 on a scale ranging from 0 to 8). The questions about the news report might have simply been too easy for the high-attention reception situation in the laboratory and for the student sample (see also Gehrau et al., in press).

Comparisons of attitudes towards the news subject revealed no significant differences between the experimental and control conditions (see Table 1). Moreover, the evaluations of the news report were also quite comparable in both conditions with one exception: participants in the experimental group assessed the news report as

being significantly less exciting ($M = 2.99$; $SD = .771$) than the control group ($M = 3.48$; $SD = .679$; $F(1,118) = 11.512$; $p < .001$). For the other seven characteristics, no differences were found. Hence, there is no support for *H2* as no impact of the conversations on attitudes and opinions was detectable. Consequently, peer conversations can be characterised as fairly consonant on the evaluative dimension. Obviously, peers seem to elaborate on the content of the news instead of arguing about the issue in a controversial fashion (see also Gehrau et al., in press).

Table 1. *Attitudes towards news subject in experimental and control groups*
[Note: Means represent average means of all items belonging to each scale, negative items have been reversed.]

	Experimental group		Control group				
	M	**SD**	**M**	**SD**	**df**	**F**	**p**
Exclusion	3.49	0.64	3.65	0.66	1, 118	1.592	.21
Costs of immigration	3.49	0.71	3.64	0.54	1, 118	1.307	.26
Consequences of immigration	3.39	0.58	3.47	0.57	1, 118	.501	.48
Xenophobia	4.29	0.74	4.29	0.58	1, 118	.002	.96

5.2. *H3 and H4: Conversation selectivity*

The conversation selectivity was analysed by counting specific conversation contents for their occurrence. In a second step the individual processing of the news, operationalized by free individual recall, and the interactive processing, operationalized by the conversations, were compared. Thus, the free recall in both experimental conditions was taken together and was contrasted with the conversations regarding the news contents mentioned.

The findings show that peers often reflect on the persons who were interviewed in the news report. More than a third (38 %) of the dyads showed an amused way of talking about the news report and gossip about the persons depicted could be observed. Conflict is another important characteristic of the conversations. Specifically, it seems to be a combination of personalisation and conflict that evokes a high amount of conversation. One person from the news report was mentioned in 55 % of the conversations: a young Muslim woman who had expressed a controversial opinion towards banning the headscarf. Furthermore, a strong effect of continuity was found: Peers talk about the potential banning of the Muslim headscarf, the development of the public debate and their views on it in 95 % of the conversations. In con-

trast, only 73 % of the discussants talked about the open day in German mosques, which was the cause of the news report but an event without continuity in news coverage. This difference was significant (chi^2 (1, N=80) = 7.44; p = 0.5) (see also Sommer et al., 2012).

By matching free recall data with the content of the observed conversations, we found a moderate correlation between the amount of information units mentioned in conversations and that individually recalled by the experimental group at the aggregate level (r = .234; p < .05). Thus, we find processes of reinforcement in terms of a replication of the news content. However, apparently peers contribute a considerable amount of new information to their conversations in order to contextualize the news contents appropriately (see also Gehrau et al., in press).

Results indicate that conversations follow a specific selectivity different from individual selective processing. This becomes evident by comparing the informational units mentioned in individual recall and in the conversations (see Figure 1): Mean differences for the categories "What" ($F(2, 157)$ = 4.56; p < 0.05), "Why" ($F(2, 157)$ = 7.13; p < 0.001) and "Where" ($F(2, 157)$ = 14.63; p < 0.001) are significant on the 5-percent-level. They demonstrate that 'hard' facts in the sense of basic journalistic information ("What?": M = 1.28; SD = 0.98 and "Where?": M = 1.00; SD = 1.01) are rarely mentioned in conversations. In contrast to the free individual recall of the news report, social interactions mainly focus on background information and explanations ("Why?" M = 3.43; SD = 1.34) for the news event.

The analysis of the general news factor conflict, measured by coding for references to conflict in both conversations and recall, indicates that overall conflict is mentioned more frequently in individual recall than in the conversations. This effect is highly significant ($t(158)$ = 3.41, p = .001). Hence, whereas the specific combination of personalisation and conflict evokes more interactive news processing, conflict in general plays a more important role for the individual processing of the message compared to the interaction. Obviously, people have a need to compare their views and reassure themselves but do not seek argument with their peers (see also Sommer et al., 2012).
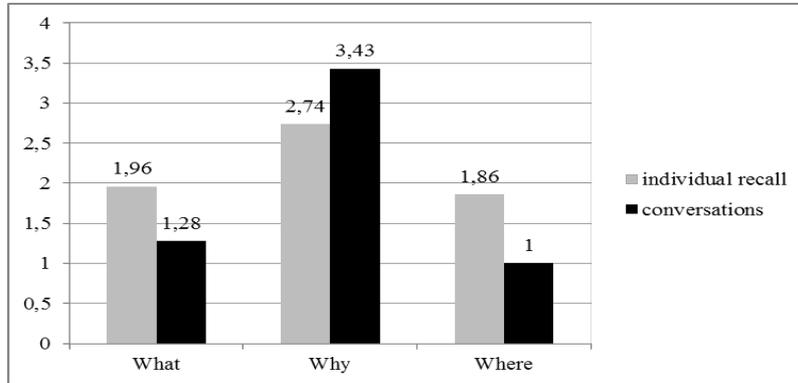
Figure 1. *References to information units from the news report: comparisons between individual recall and conversations*

5.3. *H5: Negotiation of social meaning*

The observations of conversations showed that 80 % of the participants in the experimental group asked and answered knowledge questions during conversations (see Table 2). Also, mutual reassurance and adjustment of opinions and evaluations were apparent in 73 % of the conversations. In these cases, conversation partners explicitly asked each other for opinions and assessments and answered these questions. Moreover, 90 % of the dyads evaluated the news report in their discussions. Additionally, in 90 % of the conversations, participants mentioned background information and drew connections to their own lives and experiences. Recipients seem to contextualize news information in conversation by embedding them in their personal worldviews and individual knowledge structure. Interestingly, these experiences were not only direct ones but also previous media experiences (55 % of the conversations). Discussants drew several relations to television reports, movies or newspaper articles they had seen or read earlier (see also Sommer, 2010).

Table 2. *Observed conversation characteristics*
[Note: n = 40, unit of analysis: dyads]

Conversation characteristics	Percentage
evaluations	90
references to everyday-life	90
questions about information/facts (plus answers)	80
questions about opinions/judgments (plus answers)	73
references to other media contents	55
humour	38

Corresponding to the research described above (see section 2) recipients showed integrative discussions including several perspectives on the news report. By asking and answering questions they checked and revised their understanding and elaborated on the media content by drawing relations to their pre-existing knowledge structures and personal experiences. Obviously, the sharing of perceptions seems to be quite crucial as it provides the necessary orientation in the sense of what we need to know and how we have to understand it correctly, suggesting the need for social comparison and shared reality constructions (see also Gehrau et al., in press).

6. Discussion and critical reflection

6.1. *Limitations of the study*

The experimental setting used here obviously has its limitations. In a laboratory, a social situation certainly remains a simplified and somewhat artificial simulation of the "real life". Some meta-communicative comments of the participants referring to the cameras and microphones support this notion. Moreover, the conversations were initiated by the experimenter. Thus, although we have quite reliable data that in general, people talk a lot about media stimuli with their peers, we cannot be sure whether the specific news report used in this study really evokes interpersonal discussions in peer-groups. In addition, we can only speculate how comparable the conversations recorded and observed are to the natural ones our participants usually have. This will remain the major challenge of all experimental studies in the laboratory asking participants to act in a certain way under artificial and controlled conditions.

In the study at hand, the experimental group discussed the news stimulus for ten minutes whereas the control group moved on to the recall and recognition test right after the distraction tasks, e.g. about ten to twelve minutes earlier. This may have influenced the memory results: on the one hand, individuals in the control condition had a shorter time-lag between reception and recall/recognition suggesting that their performance could have been overestimated. On the other hand, as they had no time to individually reflect the news report as compared to the interactive reflection in the experimental condition, the effects may have been underestimated as well. When developing the design, many different procedures were discussed in order to solve this problem. However, any additional task or time for the control group within the procedure would have also meant additional uncontrollable influences. This is why we decided against these options.

Another important point that needs to be addressed is the difference between the peer conversations about the news and the individual oral recall interviews. The free recall measure must be also considered as a social interaction because the participants were asked to tell the experimenter the contents of the report. Although the

experimenters tried not to interfere and gave no explicit feedback, nonverbal cues and specific interpersonal dynamics always affect the situation and thereby the results. The analysis of conversations and recall transcripts revealed considerable differences between them suggesting that the peer-conversations had much more typical features of social interaction than the recall procedures. This indicates at least a high face validity of the setting and procedure. However, more research is needed on the different modes of communication occurring when information is processed either interactively or individually.

6.2. *Strengths and benefits of the study*

Apart from the above-mentioned limitations the quite artificial and standardized laboratory setting had many advantages as well. The experimental conditions can be easily compared and the differences obtained can be explained clearly by the experimental manipulation as other confounding influences can mainly be excluded by the controlled situation. Indeed, the design allowed for identifying the influence of conversation on short-term media effects in a clear fashion. Moreover, comparing the two experimental conditions and connecting the results of this comparison to the conversation mechanisms observed is the major strength of our approach.

The interactive verbalization of the thoughts and emotions evoked by media stimuli offers the great advantage of making usually internal processes visible in a comparatively natural and contextualized way. This is why an extension of the methods in media effects research by observations of interpersonal communication seems promising. As the results yielded by both the survey and the observational measures correspond quite well with the previous findings on the subject matter we may conclude that different research approaches and designs can validate and complement one another fruitfully in the sense of a methodical triangulation.

In addition, recruiting peer persons familiar with each other for the study turned out to be helpful in order to reduce the artificiality of the situation in the laboratory and to create a comparatively natural and comfortable communication setting. Altogether, we rate this as successful. In line with findings from similar studies, most of the participants forgot the cameras quite quickly and acted casually. This notion is supported by the following results of the observation: (1) We found several humorous and playful modes of processing the news report in the conversations corresponding to the findings of qualitative reception studies. (2) Despite of a politically and ethically controversial and volatile news issue chosen as stimulus we did not detect tendencies to social desirability. On the contrary, in many groups politically incorrect and some-times flippant comments could be observed. This easy and uninhibited way of interaction refers to habitualised communicative routines that were applied by the peer dyads.

6.3. *Perspectives for further research*

Future research should replicate the findings with larger and more representative samples. In addition, long-term-designs need to be applied. In the study at hand, no pre-measure of knowledge or attitudes was conducted because any priming of the news topic before the experiment was supposed to be prevented. However, such a measure can be quite helpful as a baseline allowing for the identification of changes in knowledge and attitudes. Moreover, repeated measures are necessary in order to ensure the causality relations detected and to differentiate between short-term and long-term-effects.

Especially the processes of negotiation within the groups deserve further and deeper elaboration in future research. Specific communicative acts of harmonization or mutual enhancement but also of conflict and persuasion would clearly extend our knowledge about the detailed influences of interpersonal communication on media effects. As the sample in our study was still comparatively small and the actions observed were very diverse, a plausible quantitative measure and systematization of different classes of actions that are relevant in this context, was hard to find. Moreover, as the dyads were peers we cannot conclude which actions observed were characteristic for the specific conversation and which ones are instead general typical actions in this specific relationship. A comparison to conversations between strangers would be helpful here (see Döveling, 2012). Additionally, the relationship dimension may be very important in general. Thus, it would be relevant to recruit more peer groups of different relationship constellations (family, intimate couples, friends, acquaintances) in order to consider this as a further influencing factor. In the study at hand, we simply did not reach acceptable quantities in the different types of relationships for statistical analyses.

As we chose one specific single news report for the study we need to consider the limited generalizability of the results to other television offers and formats. However, as there were hardly any studies like this before, we accepted this caveat in the context of exploring a new approach. Meanwhile, there have been similar attempts for other news issues (Hefner, 2012) and for different television genres (Gehrau et al., in press; Döveling, & Sommer, 2012) that support the usefulness of experimentally observing interpersonal communication about media content.

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