

Recordings of digital media life: Advancing (qualitative) media diaries as a method

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Abstract

In times of digitalization, analyzing the highly complex media practices and mediated life worlds of individuals has become highly challenging, both in theoretical and methodological terms. From an empirical point of view, diary methods, and particularly qualitative (media) diaries, bear a great potential to gain access to these media practices and analyze them within the contexts of people's everyday lives. In this article, we propose that it is fruitful to apply the characteristics of real diaries to research settings and consider them when designing diary studies as a researcher. Doing so can help to collect more "genuine" data and get a more holistic and adequate picture of digital media life. These characteristics comprise: (1) authenticity and naturalness, (2) autonomy in design, (3) multimodality and materiality, (4) intrinsic motivation, (5) functionalities of diary keeping, (6) continuity and periodicity, as well as (7) inferences about cultural and social conditions. We provide suggestions for implementing these characteristics in qualitative diary studies, and discuss the empirical challenges accompanying this approach.

Keywords

media diary, life recording, qualitative methods, media use, media life, digital methods

1 Introduction

People's everyday media practices have become increasingly complex in the course of digitalization and (deep) mediatization (Hepp, 2020). Especially with the establishment of mobile, digital communication technologies, individuals' media and communication practices are characterized by an increasing mobility, simultaneity, parallelism, and convergence, which complicates the empirical analysis of said practices: With communication processes in everyday media life merging, the empirical conclusions that can be drawn from the (mere) exposure to and use of single media technologies or contents are limited. Instead, it has become more important how media users subjectively make sense of their use of media technologies and content in their everyday communication practices, how these practices relate to each other and how they are embedded

in everyday life contexts. The importance of the situatedness of media use and media choice within broader contexts of the everyday has become more apparent and less easy to ignore than in previous media environments and given earlier media practices. The methodological challenge to cope with this increased relevance of acknowledging the embeddedness of media practices hence lies in creating the most authentic empirical access possible to the media and communication practices ingrained in individuals' life worlds, and analyze them in a contextualized way.

In this contribution, we discuss diaries and particularly qualitative media diaries as a methodological tool to empirically assess people's (digital) everyday media life and media practices. In doing so, we suggest drawing inspiration for diary-based research from the characteristics of "real diaries." With the notion of real diaries, we refer to various forms and practices of life



recording that are purposefully and deliberately performed by individuals in everyday settings. In this context, we discuss what motivates people to record personal thoughts and experiences in diary form as well as characteristic features and options of free design and individual adaptation of diaries for personal demands and preferences. On this foundation, we propose to transfer characteristics of real diaries to controlled research settings and discuss the potentials and pitfalls of doing so. If people's diaries can provide relevant, detailed and reflected insights in how people use and make sense of media experiences in the context of their everyday, methodological tools that allow for a similar level of insight and understanding would be desirable.

The objective of our contribution is twofold: On the one hand, we want to describe current trends and future directions for the use of media diaries as a methodological tool in media and communication research. On the other hand, we aim at advancing particularly qualitative diary research by proposing the application of the characteristics of real diaries to research settings – in order to propose quality criteria for research with (media) diaries from the practice of keeping real diaries or critically evaluating them as a source respectively. In our view, particularly qualitative (media) diaries oriented toward the features of real diaries can help tremendously in the search for “real” and “genuine” data from within our complex, digital media environments.

2 Media change and (new) communication practices: Implications for researching media use

With the rise of digital media technologies, people's media and communication practices have significantly changed. While change in people's media use is a historical constant and every “new” technology once established (and socially adopted) potentially transforms media and communication practices (Stöber, 2004), the quality of change the process of digitalization has

brought about is outstanding. Since then, media use has changed in several regards: With the advent of digital technologies and the presence of so-called “high-choice media environments” (Prior, 2005, p. 577), a plethora of media, applications, platforms, and contents are readily available for consumption. This sheer abundance has furthered individual configurations and compositions of one's own personal media repertoire as well as cross-media practices (Hasebrink & Hepp, 2017) – with the users (more or less) actively selecting and curating media and sources used in their everyday lives. Additionally, media use is increasingly taking place as a non-exclusive practice – i. e., done while other activities are being performed, while other media are used (inter alia discussed under the label “second screen use”), and without necessarily being the focus of attention. Along these lines, situations of media use inseparably merge, and users participate in multiple media spaces and communication contexts at the same time. Use of digital media is further characterized by a certain permanent latency with users being in a constant state of availability, anticipation, and media connectivity (Kneidinger-Müller, 2018; Vorderer, Hefner, Reinecke, & Klimmt, 2017). Moreover, with the convergence of media progressing, the use of a certain technology (e. g., the smartphone) does not necessarily allow for conclusions about the contents or applications that are being used. Whereas the use of a newspaper, a radio, or television kit was highly revealing regarding the kind of media practice which was entertained, digital devices serve as a hub toward multiple experiences and attending to the device can rather obscure than reveal what a person is doing.

As a response to these developments, various theoretical concepts in the field of media and communication research were developed to trace these “new” forms of media use. Among others, the concepts of *media* or *communication repertoires* (Hasebrink & Popp, 2006), *polymedia* (Madianou & Miller, 2013), and *media ideology* (Gershon, 2010) are particularly relevant for this venture.

These concepts aim at providing a lens to observe and analyze media use in digital times sharing one big commonality: They indicate that media practices in everyday life have potentially not only become more in quantity, but are also more closely interwoven, related to each other, and are actively selected and chosen over another depending on the specific situation and / or the purposes they (purportedly) serve. One of the most prominent, although not entirely new (Hasebrink & Hepp, 2017) insights into people's increasingly complex media realities – as postulated in the aforementioned concepts – is the fact that it is not enough to look at the use of one particular media technology or content in isolation. For instance, the media repertoire approach conceptualizes media use as a comparatively stable set of various media and communication references playing together in an individual's repertoire and being related to each other (Hasebrink & Hepp, 2017). Similarly, the concept of polymedia is based on the assumption that each individual purposefully navigates a multitude of communicative options in his or her everyday media use, i. e., “an ‘integrated structure’ within which each individual medium is defined in relational terms in the context of all other media” (Madianou & Miller, 2013, p. 170). With the relationality and individuality of media ensembles, the subjective meaning attributed to certain media by the user and his / her attitudes toward the media become more important. In her concept of media ideologies, Gershon (2010) tries to provide an explanation for what guides this navigation, and delineates the reasons for and influences of media selection in specific situations. Which media technologies, outlets, and formats are selected and used, is impacted by individuals' attitudes toward these media. These attitudes are grounded in epistemic beliefs based on both the particularities of the specific media and previous experiences in the everyday life – which may be or may not be related to media use (Schwarzenegger, 2020).

These significant changes in media use catalyzed by digitalization and deep

mediatization do not only call for new concepts and theoretical conceptualizations. But they also challenge existing methodological approaches to everyday media life and people's media and communication practices. Media use, both in theoretical reflection and empirical analysis, needs to be considered in context. However, this does not only mean that the use of one medium has to be analyzed against the backdrop of other media, but also that media use per se needs to be contextualized within people's everyday ways of living, established media and non-media routines, their personal beliefs and social relationships – in short: against the backdrop of an individual's life world (Schwarzenegger, 2017; Wagner, 2021). In order to empirically consider these contexts and analyze the complex (digital) media use as it is embedded in people's everyday lives, communication scholars have to promote and develop methods that are capable of this sort of contextual analysis.

Diaries, particularly in their qualitative, ethnographic form, appear as a suitable method to grasp individuals' media practices and their subjective meanings in current (digital) media environments. They allow for a joined and continuous observation of media use episodes and situations that are not standing out of, but are an integral part of individuals' way of living. Media diaries are capable of grasping the subjective meanings allocated to media use, the past and present experiences people have (made) with media and the relationality of media practices to people's everyday lives at the same time. To illustrate the use and current position of diaries in media and communication research, we will first summarize how media diaries are and can be employed as methods and sources in the field. Afterwards, we suggest orienting media diary research toward “real diaries” and their specific characteristics, in order to do justice to the complexity of today's (digital) media lives.

3 Media diaries in media and communication research

In the field of media and communication studies, media diaries are thus far primarily used as a means to record time budgets dedicated to media use, and durations of consumption of specific media (content) as well as to explain quantitative changes in media use. In contrast, study designs that employ diaries to target the complex communicative interconnections in individuals' everyday lives are rare.

In general, media diaries enable the researcher "to 'get close' to the everyday lives of the participants" (Kaun, 2010, p. 144). Similarly, Kaufmann and Peil (2020, p. 232) have emphasized: "The main benefits of the diary method include the consideration of the participant's individual perceptions and interpretations, the immediacy of data gathering, and the capturing of social actions in natural, spontaneous settings." This potential of making the complex digital life worlds and media practices of individuals accessible is realized to different extents in media and communication research, as we will outline in the following.

However, if we consider the status quo of (media) diaries in media and communication research, we find that they are frequently applied as a methodological tool: Although they are rarely used as a stand-alone method, they often appear as part of triangulational research designs in combination with surveys or interviews (Berg & Düvel, 2012). Although diaries can be considered a well-established method in the field, they have rarely been reflected systematically in the methods literature: "at least in a strongly structured format, theoretical reasoning and methodological discussions are missing" (Kaun, 2010, p. 137). This lack of methodological reflection goes hand in hand with a huge variety of diary methods employed in the field, and is accompanied by a lack of established rules and agreed-upon standards for diaries in media and communication research. We can therefore observe a veritable proliferation of differently structured and implemented media diaries, which at

the same time also have different degrees of standardization.

3.1 Quantitative and qualitative media diary research

Most commonly, media diaries are categorized regarding their degree of standardization ranging from very open, usually qualitative and ethnographic diaries to highly structured and formalized, closed, usually quantitative diaries that typically aim at registering times spent with certain media (Yurtaeva, 2017). Fisher (2020) contrasts these extremes as ideal types, and uses the term "diary" to describe the first, and the term "ledger" to describe the latter. Although media diaries as a method are used in both quantitative and qualitative research – and can in principle be implemented with a combination of both approaches – both methodological paradigms seem to largely ignore each other when it comes to diary methods.

In quantitative research, diary methods exist alongside with other so-called "in situ" approaches such as the (*mobile*) *experience sampling*, *ecological momentary assessment* or *real-time response measurement* (Schnauber-Stockmann & Karnowski, 2020). They are commonly used as a means to empirically approach and assess situations of media use *as they happen* to get as close to what people do with the media as possible. A prominent goal in this regard is to record individual time budgets allocated to media technologies (e.g., the smartphone, certain apps and widgets, digital media in general), as well as the emotions, cognitions, reactions, and gratifications that are related to situations of media use. This perspective is also grounded in the finding that media use in digitalized societies has become too complex to rely on retrospective self-report of media users, and that self-report measures in the aftermath and in situ methods lead to considerably different results (Naab, Karnowski, & Schlütz, 2019). For instance, as Parry et al. (2021) have shown in their study, retrospective self-reports on the digital media usage of users do not match with their automatically logged use of (digital) media. In complex media en-

vironments and given the characteristics of current media use outlined above, it seems that media users are overburdened with reconstructing their own diverse, omnipresent, and sometimes not consciously reflected media practices afterwards. In this vein, it is also challenging for the researchers to determine what people have objectively done with their devices, and what sense they make of their practices, how they remember, and evaluate them.

In qualitative research, it is not so much the time spent with various media and the specificities of media use situations that is empirically approached; but rather the interrelatedness of practices, subjective experiences, and evaluations as well as the contextual embeddedness of media use in the everyday (Berg & Düvel, 2012; Fuhs, 2014). Studies drawing on qualitative media diaries are, for instance, interested in how different media and media contents used relate to each other (often based on the concept of media repertoires) (e.g., Hasebrink & Hepp, 2017); how mediated communicative interactions are integrated in larger structures of (mobile) life worlds (e.g., Berg, 2017); or how certain topics and / or media contents are encountered and reflected upon in the everyday life (e.g., Koch, Saner, Schäfer, Herrmann-Giovanelli, & Metag, 2019). Qualitative media diaries can also gradually vary regarding their openness. They can be implemented as fully open tools, but also use standardized elements in combination with open questions (e.g., Ytre-Arne, 2019).

3.2 Diaries as a methodological tool and source material

As visible from the argumentation above, the majority of diary research in media and communication research uses diaries as an intrusive research instrument, i.e., in the traditional sense of a method: specifically designed and implemented for research purposes. In research settings, media diaries are typically used to describe and understand media practices, and participants are instructed to keep the diaries over a specified period of time and note down their media-related practices.

However, as we have argued elsewhere (Gentzel, Schwarzenegger, & Wagner, 2020), there is another type of diary that can be used in media and communication research: Diaries that were kept and updated independently from the research process and for different ends can be used as source material and provide data for analysis. This is the case, if already existing diaries and data traces are used as source materials in a historical sense, i.e., as artefacts naturally written or produced without the initial presence of the scholarly eye. In this sense, diary keeping is closely related to practices of “recording life,” i.e., the (1) culturally traditional notions of identity and the nature and meaning of documenting events, observations, and things, (2) established media technologies, and (3) the mediatization of memory work (Rettberg, 2020). The most obvious use of diaries as source material is the use of “real diaries,” i.e., diaries that were created in natural, non-research settings. This method has a long tradition in historiography, and is commonly used to reconstruct the living conditions and lifestyles of past epochs (Gentzel, 2008). In times of digitalization, there is a plethora of sources of this type of diary from various media that can be dug up for subsequent empirical analysis. For example, blogs, online diaries, and other intentionally employed forms of life tracking and recording can be subject to analysis, if access is provided by their creators. Moreover, digital media to a certain extent generate “diaries” automatically by compiling lived experiences and past events: For example, commercial diary apps based on quantitative data or apps that algorithmically link images, places, songs, and posts automatically into “retrospectives” or “timelines” is steadily increasing (Humphreys, 2020). Depending on their design, they also produce new and diverse forms of data when, for example, written material is combined with or replaced by photos, videos, or voice recordings. Lastly, non-intentionally produced data such as logfiles and protocols (i.e., metadata), which emerge as a by-product of digital media use, can be used for scholarly analysis, too (Berg & Düvel, 2012).

Real diaries, and the data produced in natural settings, have some advantages compared to diaries created exclusively for research purposes. They are less obtrusive, in most cases more “genuine,” as they were not created following instructions, and hence often more informative. However, since real diaries are often produced solely for the author, they can also be lower in richness and harder to interpret. In any case, the basic prerequisite for analyzing real diaries is always the consent of the author. Individuals might be reluctant to share their completed diary, since it often contains emotions, sensitivities, and intimate, personal accounts of past experiences. In this case, researchers should make sure to guarantee confidentiality and ethically sound handling of the data at all times, and find a consensual solution together with the diary author.

Using real diaries or diary data produced in natural settings, however, is neither always possible nor desirable. Yet, the characteristics of real diaries can be fruitfully applied to research projects and diary studies, and can function as an inspiration to more real life-oriented research designs. In the following, we will outline several characteristics of said real diaries, and make suggestions for how they can successfully be transferred to media and communication diary research.

4 Collecting “genuine” data: Characteristics of “real diaries” as an inspiration for diary methods

Applying the advantages of “real diaries” to research contexts, can help scholars approach people’s complexly entangled (digital) media lives in a more unobtrusive way and lead to more genuine data on life with media and individual media practices in digitalized societies. Subsequently, we identify seven key characteristics of real diaries, which can serve as an inspiration for research projects using (media) diaries as in particular qualitative, methodological tools. This list of characteristics provided is not an exhaustive catalogue of the features of real diaries.

We rather focus on the key characteristics of real diaries as they are discussed in fields that use them as source material for research purposes; and that might offer a solution to common problems in diary research (such as artificial conditions of creation, dropout rates, individual differences in the ability to self-express etc.), if implemented in research projects. The characteristics overlap to a certain extent and some of them are closely related to each other. We present them as distinct aspects, however, so that they can be separately employed to empirical studies. The ultimate goal of applying these characteristics to often artificial research settings is to come closer to people’s media realities, practices, and life worlds. Despite the benefits of this approach, transferring the characteristics of real diaries to research settings can be challenging, as they create certain predicaments for empirical research. So, while the ideal application of the characteristics in research setting would be to realize them to the greatest extent possible in order to fully profit from their advantages, researchers always have to decide how many of the characteristics they can apply in their projects and to what extent. In empirical practice, the benefits of the characteristics will hence gradually differ depending on the research goals, external constraints, and the study design at hand. In the following, we will outline the various characteristics and their advantages, discuss the potential problems arising, and aim at providing empirical solutions to the dilemmas they create.

4.1 Authenticity and naturalness

One of the major characteristics – and advantages – of real diaries is their authenticity and the naturalness of their genesis within individuals’ life worlds. Authenticity in this sense refers to the embeddedness of the diary in everyday life contexts and the natural setting of its origin (Fickers, 2021). In contrast to the authenticity and naturalness of real diaries, media diaries as requested by the researcher are specifically designed for research purposes and hence bear the danger of social desirability, or of creating artefacts overemphasiz-

ing the role of media as something either defines, or stands out from the everyday. Moreover, diaries crafted only for research purposes can lack intrinsic motivation (see below), and might focus on aspects the author of a diary would not have considered worth recording, if it had not been demanded by the researcher. Real diaries, on the contrary, have the advantage of being “non-reactive” and “minimally invasive” (Fuhs, 2014, p. 264), since they are created by the diary author without the impression of being observed and as they wish to record. It thus seems plausible to assume that the use of more authentic and naturally created diaries produces more “truthful” data, as the method is less obtrusive. This is not to suggest, however, that a real – or in this sense authentic – diary always provides a precise and objective account of what has happened. Similar to the understanding in historical research where source material can be authentic and genuine (i. e., originate from a particular period, have confirmed authorship), the content of the source can still be erroneous, made up or manipulative. Just like a “commissioned” media diary, a real diary might still contain misleading or blatantly false information, might embellish the truth here and there, and might even be based on pure imagination. A real diary is always a subjective account, too, and researchers need to reflect and consider this subjectivity, and critically assess and interpret the data sources they work with. However, a real diary allows us to see what the authors considered important, what they observed and reflected on, what mattered to them and what was worth preserving – without having been asked to look in a certain direction in a specific way.

Achieving the ideal of authenticity and naturalness can be highly challenging from a practical point of view: Most often, specific data is needed to answer research questions, subjects of research have to be advised and supervised, and there is an ethical obligation to inform study participants of our scholarly observation. Despite this dilemma, authenticity and naturalness can and should be achieved in diary research. Firstly, barriers of dia-

ry keeping can be reduced by choosing diary methods as natural and as close to participants’ life realities as possible. For instance, data collection can be varied and even tailored to sample subgroups by providing different tools for diary keeping (e. g., paper-and-pen solutions for people preferring analogue diaries, or voice recording solutions for people preferring digital tools). Secondly, to achieve naturalness within research settings, participants can be free to decide how to incorporate the diary keeping process in their everyday routines with regard to time, place, occasions or the events that are recorded.

4.2 Autonomy in design

Closely related to the characteristic of authenticity and naturalness is the feature of autonomy in design, which is typical for real diaries. While there are certain conventions on the nature of a diary, the possibilities of design are in principle unlimited. The form, modality, length, style and content of the individual entries and the diary overall are entirely up to the diary author, and can be chosen as wished and preferred. Form, mode and style of the diary can also change over time or be diversified within, and can combine different forms of articulation dependent on topic, content, or mood of the author. For (media) diary research this high autonomy in design would bring the advantage of being able to grasp subjective evaluations and interpretations as they are perceived and experienced; and perhaps more importantly, as they can and want to be expressed by the subjects of study. This can be particularly helpful in getting close to people’s lived realities as competence and ability in expression can vary significantly among research participants. Koch et al. (2019), for instance, delegated the decision on how to fill out the diary to their study participants by asking them only to document their encounters with science. No particular understanding of what had to be considered as science was provided, and there were no restrictions but only illustrative examples on the kinds of encounters that could be documented. Moreover, methodological challenges that have been

identified in previous diary studies, such as a “digital fatigue” (Kaun, 2010, p. 143), which can result from imposing certain (digital) forms of diary keeping, can be prevented. Even more so: Autonomy in design might contribute to a reduction of sample bias in the first place, which is a common problem both in quantitative and qualitative research. The danger of merely attracting individuals who are able and willing to express themselves in written form can be lowered if various forms of self-expression are offered. Despite its advantages, striving for high autonomy in diary design complicates the comparability of the data, and hence has to be considered before data collection.

4.3 Multimodality and materiality

Another important characteristic of real diaries is the characteristic of multimodality and materiality. Given the nowadays available, various (digital) possibilities, it seems that diaries are much more multimodal and multimedia-based than before. However, traditional real diaries have a long tradition of using various media and materialities combinedly: Photographs glued into paper-and-pencil diaries, tickets to concerts or the theatre, plane boarding passes, love letters, or newspaper snippets and clippings have been and still are common means of diary keeping. Still, the digital possibilities have augmented the possibilities of using different media, platforms, and applications, combining textual, visual, and audiovisual content and remixing and rearranging it as desired. Relying upon multimodality and materiality in research projects using diary methods can increase the richness in detail of the data collected, and can provide relevant context for interpretation (e.g., if the media content used by the participant is cropped and pasted into the diary; Koch, Klopfenstein Frei, & Herrmann, 2021; Wagner, 2021). At the same time, multimodality and materiality can create similar empirical difficulties as the characteristic of autonomy in design. For example, if one participant chooses to (audio-)visually record media practices, another to produce written text, and a third to rely on a mixed approach, the data

has to be unified for analysis. How much data diversity is necessary (and desired or manageable) needs to be reflected and actively regulated in advance by the research team, i.e., before collecting the data. Planning data analysis ahead and adjusting instructions for diary creation accordingly helps prevent unmanageable forms and amounts of data.

4.4 Intrinsic motivation

Keeping study participants interested and motivated is one of the major challenges in diary research – especially since most studies cover a rather long period of data collection (Kaun, 2010). High dropout rates are a problem that needs to be countered, ideally by engaging research subjects more with their diary. Real diaries, since they are deliberately kept and individually created, are often created with a high intrinsic motivation (Fuhs, 2014). Authors of real diaries usually make space and time for the diary keeping in their everyday lives, as this practice enables expressing and reflecting upon oneself. Making use of these features of a real diary in research settings by promising emotional gratifications and holding out the prospect of self-insight can help engage participants over a longer period of time, and ultimately reduce dropout rates. This goal can be reached, for instance, by informing participants that they will get the diary back once the data is stored or by emphasizing the benefits of this piece of identity and memory work (Kaun & Schwarzenegger, 2014). Moreover, depending on the respective research topics and goals, varying degrees of openness and even individual content-related priority setting can be an adequate means to ensure long-term participation. Especially if a topic is rather sensitive (e.g., consumption of pornography, the role of media for grief work) or participants feel uncomfortable with sharing too much detail on a certain aspect (while happily providing information on another), this can heavily impair intrinsic motivation and engagement in the study. It can thus be useful to enable certain degrees of freedom in the diary keeping to heighten and maintain intrinsic motivation. The rea-

sons for this willful negligence, however, should then be addressed in subsequent interviews or in the context of other triangulation methods. Furthermore, if this approach is chosen, it is again crucial to already reflect upon the extent of freedom that shall be provided in the study planning phase in order to ensure subsequent usability of the data.

4.5 Functionalities of diary keeping

Along the lines of intrinsic motivation, real diaries possess different functionalities. This means that also depending on their form and design, diaries could potentially fulfill different functions for the authors. Diaries may serve for the documentation and recording of certain life events or day-to-day activities for the purpose of gaining self-insights, for processing emotions and cognitions, as a leisure activity, for compensation or escapism – or for all of these things at the same time. Being aware of these different functionalities of the diary method in research settings can help setting up the study (e.g., by using more closed questions or open spaces depending on the intention), and instructing participants accordingly in how they should engage with the diary. For instance, in a forced disruption study by Kaun and Schwarzenegger (2014), the diary was part of an experimental intervention, in which the participants were asked to abstain from using Internet-based communication over a period of time and reflect upon their experiences. Hence, the questions in the diary were rather specific pointing to the perceived difficulties and employed replacement strategies during the phase of media abstention. Researchers explained to the participants that this reflexive diary-keeping would make accessible for them how deeply ingrained media are in their everyday lives. The different potential functionalities, if reflected by the researcher and emphasized in the briefing to the study, can then also be used to foster and potentially increase participants' willingness and perseverance in the research process.

4.6 Continuity and periodicity

Most typically – and contrarily to the majority of empirical diary studies – real diaries are kept continually over a long period of time, sometimes years, or even a lifetime. Keeping a real diary thus is a repeated and continuous communicative practice, which is carried out rather regularly (usually daily or at least weekly), and in itself constitutes a part of a person's habits and lifestyle. Continuity and periodicity can again be closely linked to the purpose of diary keeping and the functions (e.g., close documentation of occurrences or emotional relief) associated with it, resulting in rather frequent and detailed descriptions or rather occasional reflections whenever something noteworthy has happened. Depending on the nature of the diary writing, the produced data therefore often allows for a rich reconstruction of inner worlds, daily activities, or special events in an individual's life. Media diaries used in research contexts on the contrary are usually limited to a maximum of one to two weeks and thus provide insights into a specific temporal segment of an individual's everyday media use. Whereas in most cases, a certain predetermined span of time is enough for the purpose of an empirical study, there can be instances where longer data collection periods may be necessary (for instance, if the use of rather rarely consumed media content is tracked and reflected upon, or if significant changes in individuals' lives and media behavior are the subject of research). Whether one week or several months – a regularly kept diary is in any case a target dimension in (media) diary research. This is again closely related to the challenge of keeping participants engaged and motivated to complete the research task. Regular reminders through various media channels (e.g., via email or WhatsApp) to the participants are a probed means of increasing the probability of regular diary keeping and preventing unnecessary missing data. Digital tools and applications for collecting diary data nowadays allow for automatic reminders that can be pre-programmed (Hohmann, 2021). Although these reminders can facilitate and automate communicative work

on the side of the research team – which can be particularly useful with larger samples – personal interaction with and personalized address by the researcher should not be replaced altogether. Moreover, reminders may reduce authenticity and naturalness of the data to a certain point, and should thus not be overdone.

4.7 Inferences about cultural and social conditions

Whereas the majority of the aforementioned characteristics of real diaries were discussed as inspirations for the research process and regarding their practical employment, the last characteristic refers to the potential perspectives (media) diaries can provide. Although both real and research-induced diaries are a highly individual and subjective window to the world, the descriptions and events we find there can provide conclusions about the surrounding cultural and social conditions under which people (currently) live. This aspect has repeatedly been shown for historical cases (Gentzel, 2008) and is one of the reasons why diaries have regularly been used as source materials in historiography (Gentzel et al., 2020). These inferences about the prevailing cultural and social conditions, norms, and expectations experienced or perceived in the everyday is usually achieved in two ways: external contextualization and internal contextualization. External contextualization describes the process of relating and proving consistency through other primary and secondary sources (such as archival material or media reporting), while internal contextualization comprises references to super-individual phenomena such as social events or (media) discourses that are only reported individually but are relevant to a larger group, or all of society. This potential of real diaries can – to a certain extent – also be made use of in research settings. The description of a deeply integrated, natural digital media use in media diaries, for example, can hint at the way people in today's society deal with digital technologies and how everyday life worlds are permeated by digital media and how the use of digital media technologies or

applications is linked with or rooted in other social activities, the maintenance of friendships, entertaining social bonds, work or educational routines, or the family life. Depending on the research goal, this potential can be reflected upon and made use of through means of internal or external contextualization. This particular characteristic implemented as a target dimension in research also enables for contextualization of media and communication practices within the general context of an individual's life world. For instance, if besides the actual media use other aspects such as daily routines, personal conditions, or social relationships are assessed, the significance and centrality of media in an individual's life can be estimated (e.g., Wagner, 2021).

Altogether, these seven characteristics of real diaries can easily be transferred to diary approaches in media and communication research, and inspire the way we plan and conduct diary studies in times of digitalization. If reflected carefully and tailored to the specific research problem at hand, the application of these characteristics can provide an empirical advantage in the search of real and genuine data, and describe the complex digital media life more adequately. The characteristics of real diaries presented here are closely interrelated, as we have mentioned above, which is also relevant for their methodological application. As a consequence, we do not always need distinct methodological steps for the implementation or foregrounding of a particular characteristic in the research design. In some instances, one single methodological decision will allow the realization of several real diary features. For example, if the participant is free to decide the form of how the diary is to be kept, several characteristics such as motivation, authenticity and naturalness, or continuity can be implemented. This interrelatedness can, however, also backfire and if one element of the diary keeping task is designed in a demotivational mode, the negative impact may also play out in various ways. In general terms, an orientation toward real diaries will in many cases

increase data complexity and might sometimes reduce data comparability, aspects such as its potency to answer the research question, efficiency, functionality, and not least research pragmatics should be considered. Weighing the pros and cons of the characteristics of real diaries should in any case start at the beginning of the research process and be deeply embedded in the phase of study conception to avoid unpleasant surprises during data analysis.

5 Current and future trends in diary research: Digital tools and data analysis

Looking at the potential the characteristics of real diaries can have in tracing, describing and explaining (digital) media practices in research settings, it needs to be considered that not only media practices have changed: The tools and applications that can be used for diary keeping, data tracking, and analysis of diary data have also changed significantly with the availability of digital media technologies. With various digital tools and applications readily available, researchers no longer have to rely on the classical paper-and-pencil solutions for diary research. Even more so, for generations who are likely to never having privately kept a paper journal and whose personal media communication is rather based on swiping, typing, and talking, a paper-and-pencil approach can be an alien element affecting the quality of data produced in such way. In order to approach communicative life worlds in an adequate way, required documentation and recording techniques should align with and blend in with the established communication routines as far as possible and diminish distance between lived experience and data gathering rather than increasing it. Digital media and applications are now commonly used to record and express subjective experiences in the form of a diary (e.g., Kaufmann & Peil, 2020; Schnauber-Stockmann & Karnowski, 2020; Yurtaeva, 2017). In this context, the technology used for diary keeping and data collection can either be existing

platforms and applications that are then employed for research purposes (e.g., instant messaging apps such as WhatsApp, Evernote); or tools originally developed for research purposes such as the media diary software MeTag developed at Bremen University (Hohmann, 2021). Regardless of their original contexts, the various technological solutions enable the standardized logging of media time budgets just as well as the creative, multimodal and open documentation of everyday life experiences. Thus, digital media have “altered the nature of diary-writing” (Kaufmann & Peil, 2020, p. 232), and can significantly facilitate the research process. The various multimedia possibilities of diary keeping (e.g., voice messages, photos, videos, WhatsApp messages, or a combination of them) we mentioned in the previous subchapter have already been used in a multitude of diary studies in the field. Employing media and technical solutions already embedded in individual’s media repertoires and everyday media practices can thereby make diary keeping and expressing one’s individual experience a lot easier for the study participants. This also holds true for qualitative (media) diaries, as two studies by Koch et al. (2021) on media use and everyday media practices demonstrate, in which they employed qualitative “smartphone diaries.” It also seems that the data quality is not significantly impaired by different ways of data collection: Hoplamazian, Dimmick, Ramirez, and Feaster (2018) have compared different types of data collection (paper-and-pencil, audio recorder, mobile device) and came to the conclusion that the data quality is largely stable. However, their findings are limited to specific “time-space diaries” – more in the sense of Fisher’s ledger – and can hence not be fully transferred to more open diaries. For more openly produced qualitative data, researchers should bear in mind that different modalities and materialities of the collected data might reduce the comparability of data.

In general, besides data collection and digital tools for this purpose, a hitherto rather neglected aspect is the analysis of diary data. Rare applications such as the

aforementioned diary app MeTag have integrated tools (called MeTag Analyze, Hohmann, 2021) enabling data analysis within the predefined borders of the programmed application. Qualitative data analyses programs such as ATLAS.ti or MAXQDA technologically enable analyzing various sources and materialities of diary data combinedly. However, it is not only the technological side of data analysis that is relevant here. Particularly if (media) diaries in research settings are oriented toward the characteristics of real diaries, the profound question of data comparability, detail, fit, and expressive value of the data needs to be considered, and adequate procedures of data analysis have to be chosen. This already begins at the level of the single diary: Whereas diaries are rich in principle, they do not necessarily need to be so in every instance or in every single entry made in it. Diary entries that typically vary in richness, elaboration, modality, structure and so forth are common features of real diaries, and should also be accepted as features of diaries when used as a method. While this might indeed impair comparability and complicate data analysis, heterogeneity, customization, and individual interpretation of diary keeping can also be an asset with regard to data gathering rather than a constraint. When analyzing the data, it must further be decided, if and in which form the (textual, visual, multimedia) data should be unified across all diaries. In case different data forms exist within a research project and, for example, textual data is chosen as a common basis for the analysis, this unification is of course at the expense of the richness of the (audio-)visual data. This can either be appropriate or incommensurable depending on the research question, and thus needs to be carefully considered in advance by the researcher. Related to this, one needs to decide if the material is structured and analyzed according to form (i.e., textual, visual, etc.) or content characteristics (e.g., thematic focus, meaningfulness, reflexivity). In doing so, the main research focus and central research questions should always serve as guidelines – especially since qual-

itative diary data are per se rich in nature and might become unmanageable if they stem from various sources and make use of different modalities. Along these lines, it can also be helpful to consider recommendations for data management beforehand, i.e., when planning the empirical research project (Peter, Breuer, Masur, Scharkow, & Schwarzenegger, 2020).

Finally, researchers have to ensure that the diverse data can indeed be analyzed with qualitative procedures of data analysis, so that the data richness and detail can be made full use of. It might even become necessary to develop new approaches or adapt existing analytical procedures to the diverse data, as it has for example been the case with the procedure of Visual Grounded Theory Methodology (Mey & Dietrich, 2016). In triangulation designs where diary data are combined with interview data for example, it can also make sense to subject the diary data to a specific analysis procedure (e.g., visualization of developments over time) to answer specific research questions, while also analyzing both data forms (diary and interviews) combinedly with a different procedure (Berg, 2017).

At the same time, bringing together various data (sources) is a challenge, which is quite common in qualitative research, and especially in triangulation designs, in which different methods or different types of data are integrated for a fuller picture and a more comprehensive approach to the area of interest. Integrating and contrasting various data sources and types indicative of distinctive degrees and levels of subjectivity, ranging from the documentation of events, activities, and experiences to the reflection of causes, consequences, contexts, and conditions is something qualitative research within an interpretative paradigm is equipped and experienced to do and has strategies and procedures to cope with.

6 Conclusion

Diaries as methodological tools and sources are manifold and employed quite regularly both in quantitative and quali-

tative form in media and communication research, although largely neglected in methods literature. They provide unique possibilities to approach the mediated life worlds of people, and to empirically assess individuals' complex media practices in times of digitalization. This holds true both for diaries specifically designed for research purposes (diaries as methodological tools) and for diaries originally created in non-research settings (diaries as source materials). Qualitative media diaries collecting data on subjective evaluations and contents of life with (digital) media are particularly apt to analyzing media behavior in context and considering the relationality of media practices in digital times. Along these lines, we have argued that the characteristics of real diaries can be used as an inspiration when designing qualitative (media) diary studies, and identified seven characteristics that can contribute to more genuine, adequate data. As media and communication practices are highly complex in times of digitalization, the application of these characteristics of real diaries can advance (media) diary research by both providing solutions for common empirical problems and getting closer to the reality of media practices. Techniques relating to a higher autonomy, heightened intrinsic motivation, continuity, and periodicity, as well as to specific functionalities help overcome typical obstacles of diary research such as high dropout rates, dwindling commitment, differences in self-expression and meaningfulness, and even sample bias to a certain extent. Moreover, techniques related to authenticity, multimodality and materiality enable research that is closer to individuals' life worlds and everyday media practices. Finally, drawing inferences about cultural and social conditions sensitizes for the societal contextuality and embeddedness of individual practices.

In striving for more genuine data, however, one must also consider that the respective empirical scenarios are as diverse as their purposes. When applying the characteristics and translating them empirically, there is hence no one-size-fits-all model and no overall magic solu-

tion. Depending on the purpose of the study, the research resources at hand and the composition of the sample, the extent to which these characteristics can be implemented needs to be carefully weighed. No matter the concrete empirical implementation, these methodological decisions have to be made beforehand and be integrated in a proper data management and analysis plan. This way, potentially necessary adjustments can be made at an early stage, for example, by structuring the diary more strongly in advance (i.e., using more closed questions) or by specifying the desired modalities (e.g., written text, photos only etc.). Furthermore, and as mentioned before, when mapping out the empirical design, it is not always necessary to employ separate, distinct strategies to achieve an implementation of all characteristics, since some of the features of real diaries are closely interrelated. For example, letting participants select their preferred form of diary keeping (e.g., voice messages, videos, text) may heighten authenticity and naturalness, contribute to intrinsic motivation, warrant continuity, and lead to multimodality and materiality all at once. At the same time, it is notable that this interconnectedness of the different features can also have the converse effect, i.e., that the emphasis on one feature leads to the limitation of another. This can, for example, be the case if a researcher encourages continuity through reminders, which might impair authenticity and naturalness.

With this article we provide grounds for reflection and suggest criteria that require consideration when designing diary studies. How much of each of the characteristics of real diaries can or need to be implemented in the methodological design based on what goals? And at what price for empirical practicability comes this striving for more genuinity, realness, and openness of the diary as a tool? As we pointed out, this consideration also requires taking into account the characteristics of the research goal pursued, the features of the diary to be implemented, the peculiarities of the study participants, and the desired or manageable degree of diver-

sity and complexity in the data analysis. This paper is also an invitation for a more thorough methodological debate regarding the benefits and pitfalls of diary-based methods for approaching digital media use and everyday life in digitalized societies. Altogether, a more systematic methodological reflection of the potentials and limitations of diary methods is desperately needed in the field of media and communication research. It is only when empirical experiences are exchanged, reflected, and systematically discussed, that we can make full use of the potential of the diary method.

Conflict of interests

The authors declare no conflict of interests.

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