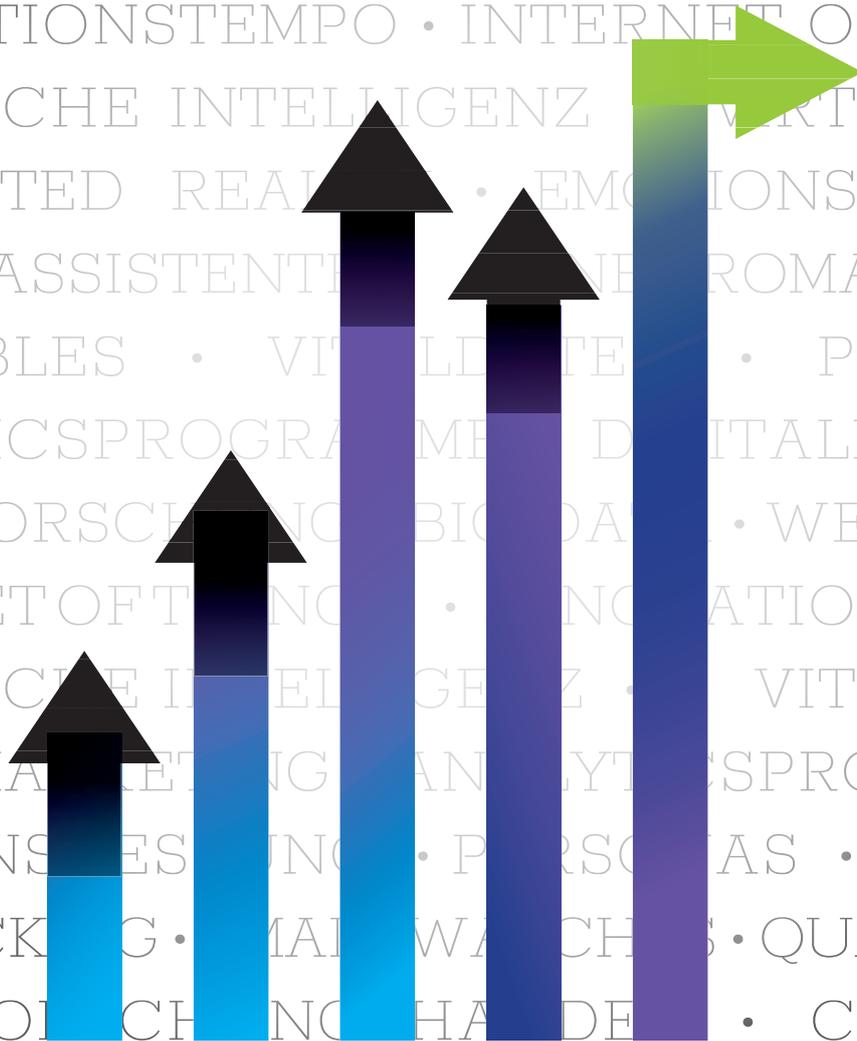


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# Vorwort

Die **Marktforschung** ist ein vergleichsweise **junges Fachgebiet**, das in seiner Entwicklung bereits eine **Vielzahl von Veränderungen** erfahren hat. Kaum eine Disziplin verändert den eigenen Methodenkanon aufgrund technischen Fortschritts so häufig wie das Handwerk der Marktforschung. Seit dem Aufkommen des Internets hat sich dort das **Innovationstempo**, wie in anderen Marketingdisziplinen auch, **deutlich erhöht**.

In den vergangenen Jahren waren die **Digitalisierung** sowie **Big Data** wichtige Themen. Technische Innovationen wie **Chatbots** werden zumindest testweise zunehmend eingesetzt. **Künstliche Intelligenz, Virtual** und **Augmented Reality** sind weitere Techniken, die das Potenzial haben, die Marktforschung nachhaltig zu wandeln. Die Vernetzung im **Internet of Things** kann der klassischen Marktforschung Konkurrenz machen, indem auch ohne klassische Marktforschung Nutzerdaten gesammelt werden. Auch **Sprachassistenten** können dazu eingesetzt werden.

Die **qualitative Marktforschung** profitiert ebenfalls von der Digitalisierung. So können **Smartphones** mit ihren integrierten Kameras dazu eingesetzt werden. Der technische Fortschritt beflügelt die Forschung unter dem Schlagwort **Neuromarketing**. **Eyetracking und Emotionsmessung** wird **via Webcam** möglich und bringt das Marktforschungslabor in nahezu jeden Haushalt. Einfache Hirnstrommessungen finden über Kopfhörer statt und mit Hilfe von **Smartwatches** und **Wearables** werden Vitaldaten von Menschen zum festen Bestandteil der Forschung. Last but not least sind **Google und Co.** zu nennen, die mit ihren **Analyticsprogrammen** der etablierten Marktforschung Konkurrenz machen.

Diese und weitere Veränderungen wollen wir in dieser Ausgabe von „PraxisWissen Marketing – German Journal of Marketing“ unter dem Titel **„Innovation in der Marktforschung“** analysieren. In acht Beiträgen werden der **Einsatz humanoider Roboter** in der Marktforschung, **qualitative Forschungsmethoden** wie etwa der Einsatz von **Gesichtserkennung** sowie des **Eye Trackings** näher untersucht. Es gibt ein Fallbeispiel aus dem **Handel**, in dem Erkenntnisse des **Neuromarketings** berücksichtigt werden sowie eines aus dem **Tourismus**, in dem **Personas für das nachhaltige Reisen** vorgestellt werden.

Wir bedanken uns ganz herzlich bei allen Autorinnen und Autoren, den Mitgliedern des Herausgeberbeirats und allen anderen Personen, die an der Entstehung dieses Werks beteiligt waren.

Berlin im Oktober 2020

Andrea Bookhagen

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## The photo-based qualitative interview – potential applications to market research and current challenges

Anne-Katrin Kleih, Mira Lehberger, Kai Sparke

Fotos sind aufgrund technischer und digitaler Entwicklungen ein wichtiger Bestandteil der privaten und öffentlichen Kommunikation geworden. Die qualitative Fotobefragung ermöglicht es, nicht nur subjektive und implizite Faktoren zu untersuchen, sondern sich auch die alltagsweltliche soziale Praxis des Fotografierens zu Nutze zu machen. Ziel dieses Beitrags ist es, die Anwendbarkeit der Fotobefragung in der Marktforschung aufzuzeigen und forschungspraktische Herausforderungen zu diskutieren. Angesichts der methodischen Herausforderungen sollte eine Auswertungsmethode die Eigenart von Bildern beachten, eine große Menge von Bildern handhaben und Foto- und Text-Analyse verbinden können.

Photos have become an important part of private and public communication due to technical and digital developments. Photo-based qualitative interviews are capable not only of investigating subjective and implicit conditions, but also of making use of the everyday social practice of taking pictures. The goal of this article is to demonstrate the applicability of the photo-based qualitative interview to market research and to identify and discuss practical research challenges. We conclude that the method used to analyze the data from photo-based qualitative interviews must be able to consider the idiosyncrasies of pictures, to handle a vast number of photos, and to combine photo and text analyses.

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## 1. Introduction

Our society is increasingly shaped by visual media. Pictures and photographs are easily and frequently produced, reproduced and shared, both for public and private purposes. Photos are an important form of communication. Consumers share much of their personal experience of products and services by using photos. In photo-based qualitative interviews researchers use photos taken by participants. Photo-based qualitative interviews have become possible principally because of two related developments. First, the technical progress of digital photography enables the easy reproduction and distribution of images. Modern digital cameras are so advanced that they automatically adjust every setting (e.g. focus, exposure time) so that they are very easy to use. Further, the emergence of smartphones with integrated high-quality cameras, as well as large storage capacities, memory cards and fast access to social media, has made it easy to share pictures with a large group of people. Secondly, along with these technical innovations, the social practices of producing, sharing, watching and handling photos of all kinds have become common across all kinds of media and environments. The use of images has become culturally familiar. Each day, we experience a flood of images from advertisements, the news and private communications. Photos capture not only holidays, birthdays or other important moments like weddings; they also record everyday actions like eating lunch or going out. Everything can become the subject or object of a photograph, including things that were previously considered indecent (Buchner-Fuhs 1997, p. 202). We have become socialized as “image users”, and we have culturally determined ways of producing images and looking at photographs (Fuhs 1997, p. 271). We, as image users, use pictures and media (as well as non-iconic signs such as text and language, and other social interactions) to construct our social world. Therefore, photo-based interviews not only utilize the techniques of easy photo production, they also make use of the recently evolved social habit of taking pictures of everything in every situation.

Although photo-based qualitative interviews have not played an important role in social research so far, they already have a long history (Fuhs 1997, p. 275). Their roots go back to the 1920s, when anthropologists used photos to document their ethnographic field research, for example, the lives of indigenous people (Malinowski 1981; Jacknis 1988). John Collier was the first researcher to use photography for interviews. He took pictures of situations and showed them to his interviewees to investigate their understanding of the images (Collier 1957). In the 1980s, some sociological studies used photography as well. For example, Bourdieu (1983) and Goffmann (1981) investigated gender relations in advertisements. Finally, Wuggenig (1989, p. 114) was the one who coined the term “Fotobefragung” (photo-based qualitative interview). He conducted biographical milieu studies, in which participants took pictures with instant cameras, and interviews were held directly after the pictures were taken. In recent years, an increasing number of publications have used photos in interviews. For example, photos taken by participants have been used to investigate home food preparation practices (Mills et al. 2017), eating behaviors (Patricia et al. 2017), and the role of food in family relationships (Ramalho et al. 2016). However, the photos in these examples were mostly used to support the interview process, not treated and analyzed as independent data sources.

This short outline of the origins of the photo-based qualitative interview shows the different possible ways of integrating photography into the research process; pictures can

be used as illustrations, as evidence, as historical sources, and as a means of conducting interviews. In interviews, photography can be used for different purposes, including as a means of investigating historical, cultural, or biographical information (Fuhs 1997, p. 278; Stoetzer 2004, p. 365). However, photography can also serve the purpose of exploring subjective perspectives, tastes, and design preferences. The latter purpose is specifically interesting for market research.

In the following sections, we introduce the method of the photo-based qualitative interview. Furthermore, we outline how the method can be useful for market research and identify current practical and methodical challenges.

## 2. Method description of the photo-based qualitative interview

Conducting a photo-based qualitative interview is a participative approach (Kolb 2008b). Typically, the process involves three steps.

1) Work assignment: The researcher asks participants to take pictures related to a specific topic. The topic can be anything the researcher is interested in. However, it is easier for participants to have topics that can be expressed visually. Photographs can only display discrete objects. This means that a photo-based qualitative interview is especially useful when investigating phenomena that can be expressed in visible and concrete objects or symbols (Fuhs 1997, p. 267). Physical things do not only have functional meanings. They embody goals, emotions, and skills, or mirror certain aspects of the personality; they are signs of a certain lifestyle, representing attitudes, achievements, or social relations. They are a specific form of objectivation of biographical history (Wuggenig 1989, pp. 114-115). Photographs that display such discrete objects or subjects can be a way to discover the internal views and subjective interpretations of participants.

2) Interview: The researcher receives the pictures, and holds interviews to discuss them. The function of the photographs in the interviews is to generate narratives, a process also called “photo-guided eliciting” (“photogeleitete Hervorlockung”, Harper 2000, p. 414). Photos are stimuli that require explanation and interpretation; they trigger associations, emotions, and moods, and they evoke and support memories and help participants to reconstruct the past (Buchner-Fuhs 1997, p. 200). This is why integrating photos into an interview facilitates communication and can reduce stress for the interviewee. Participants are experts in their own photographs, and they can structure the process of the interview by deciding the order in which the photos are examined (Kolb 2008a, p. 4). As a result, a symmetrical dialog with the researcher is possible (Wuggenig 1989, p. 112). Through the process of examining and discussing the photos, a new understanding or a new reality can emerge. Stoetzer (2004, p. 365) suggested describing the function of photos in a photo-based qualitative interview not only as stimuli, but as a request or invitation to do ‘visual work’, because such an approach requires intense engagement with the images.

3) Analysis: The interview is recorded and transcribed. The data that result from a qualitative photo-based interview consist of pictures and text, which refer to each other. The interview text is an initial reflection on the pictures, and a first way of looking at

them. The interview text can be analyzed using typical qualitative methods, such as using qualitative content analysis by building deductive/inductive categories and codes. However, in addition to the interview text, the interview photos can also offer detailed insights. Considering the immense social importance of photos, we consider that photos should no longer be disregarded as a data source. Approaches within the qualitative social sciences to analyzing photographs have included, for example, the documentary method (Bohnsack 2005), visual segment analysis (Breckner 2012) and figurative hermeneutics (Müller 2012, 2016). It is surprising that the social sciences have only recently begun to find ways to analyze pictures. The reason may be that pictures were previously not considered to be valid or scientific, as they can be manipulated. In addition, pictures are rich with both manifest and latent meaning, which makes them difficult to use as a scientific source. The polysemy and ambiguity of pictures is lost through the interpretation process, in which meaning is transferred into language and thus reduced to one possible point of view (Wuggenig 1989, p. 110; Fuhs 1997, p. 274).

### 3. Utility for market research

Photo-based qualitative interviews have many characteristics that make them valuable for market research. The openness, reflexivity and communicative character of a photo-based qualitative interview also constitute characteristics of qualitative market research (Naderer & Balzer 2011, pp. 30-32). Consumers experience products and services, which are the core objects of market research, first and foremost visually, including at the point of sale, through advertisements, or by experiencing specific customer services. Thus, photo-based qualitative interviews are suitable for capturing such visually centered experiences. They enable market researchers to see products and services through the eyes of customers and consumers.

Photo-based qualitative interviews facilitate the **active involvement of participants**. It is possible, and indeed easy, for researchers to ask participants to take pictures related to a specific topic, given that participants are typically socialized image users. The task of taking pictures forces participants to reflect on a topic and to present their own viewpoints. It enables participants to actively take part in the research process. Their new role as “operators” (Wuggenig 1989, p. 113) enhances participants’ contributions and yields more extensive and detailed data (Collier 1957, p. 857). It allows participants to introduce new aspects of a topic that the researcher did not previously consider.

The photo-based qualitative interview method allows **easy access to unknown environments** with no or low disturbance by the researcher. Since participants can take pictures in their own social environments without the presence of the researcher and without being watched, the researcher gets access to (social) rooms and situations which he or she usually would not have.

Pictures entail **detailed and rich information**. Through the photographs the researcher gains a more detailed view of the research subject than is possible with other research methods (e.g. pictures of home furnishings provide more detailed information than a list of furniture).

Photo-based qualitative interviews enable **access to difficult-to-reach consumer segments**. Certain groups of consumers that are not easily targeted through conventional research methods (e.g. focus groups) can benefit from a photo-based interview. Examples of such groups are children or people who have disabilities or linguistic difficulties. A photo-based qualitative interview allows researchers to understand the structure of thought and perception of children and gives speech-impaired people the opportunity to express their points of view. Different subcultures, be they religious or ethnic or alternative lifestyles, can also be explored with help of a photo-based interview without the need of the researcher to intrude on such social structures, since participants can take the pictures themselves and send them to the researcher.

Photo-based qualitative interviews **save costs**. Other market research methods, such as consumer ethnography or usability studies, are very expensive and the researcher needs to be present during the whole data collection. Photo-based qualitative interviews allow the researcher to be 'present' for the research without being physically present at the time photos are taken.

Overall, there are **many possible applications** of photo-based qualitative interviews in market research, especially in the field of consumer behavior. Market researchers and practitioners are often interested in understanding consumer behavior for the purposes of inventing, developing, and improving certain products or services. Possible research fields include product innovations and product developments that are to be progressed in close consultation with consumers, brand research, usability studies and product tests. With (everyday) photographs, market researchers can explore participants' subjective points of views and perceptions, motivations, values, attitudes, memories and learnings. Products are central to everyday life and are hence especially suited to a photo-based qualitative interview.

## 4. An insight into the practice of our project

In our qualitative research project, we investigated consumer behavior related to fruits and vegetables as the main product categories of the horticultural sector. Fruits and vegetables are generic products that have, in comparison to most other groceries, no brand character. The goal of our project was to explore the subjective meaning of the purchase and consumption of fruits and vegetables. We were interested in the everyday uses of fruits and vegetables, the routines into which they were incorporated and the social contexts in which they were used. Since there was a risk this topic could seem rather trivial for consumers, we searched for an approach that would trigger reflection and narrative building by participants. We therefore chose the photo-based qualitative interview approach, in order to gain a deeper understanding and access implicit processes. Incorporating pictures into the research process enabled participants to perceive concrete experiences with fruits and vegetables and their usage.

We selected the participants by purposive sampling. We were looking for informative cases that were relevant for the research question (Schreier 2011, p. 245). We considered gender, household situation and life phase to be important characteristics that influenced dietary behavior. Studies have verified that there are gender differences in eating behavior (MRI 2008, pp. 22-91; Mensink et al. 2002, pp. 82-112). For example, men eat twice as much meat than women (MRI 2008, p. 44). Different life phases also

influence dietary habits. Further, consumption decisions, especially those related to groceries, are not only individual decisions. These decisions are dependent on other household members and on time and budget resources. Dietary behavior is therefore the result of internal household processes (Seel 2004, pp. 18-45), which is why life phases are a better predictor for consumer behavior than solely sociodemographic variables like age and income (Kroeber-Riel/Gröppel-Klein 2013, p. 457). To cover the whole range of fruit and vegetable consumption behavior, we aimed to analyze a heterogeneous sample. For the classification of the life phases we used the six-stage model from Arndt (1979). We adapted the model by not using marriage as a criterion, and instead considering whether couples lived in the same household. Based on this, six types were constructed: Bachelor (single, <40 years old); Newly Married (young couple, <40 years old); Full Nest I (couple with children ≤10 years old); Full Nest II (couple with children >10 years old); Empty Nest (couple with children that had left the house); and Solitary Older Person (single/divorced/widowed and ≥40 years old).

We asked the selected participants to take pictures which showed what fruits and vegetables mean to them. After two weeks, we received the pictures. We printed the pictures and during the subsequent interview, the participants had the opportunity to explain and comment on them. In addition, we conducted a topic-centered guided interview, so that aspects that were not mentioned by the participants themselves could still be covered.

Fig. 1 shows a sample of pictures from two participants. Participant A belongs to the group “Empty Nest” and participant B to “Full Nest 1”.



**Fig. 1** Example of pictures from two participants

## 5. Practical and methodical challenges

During the research process, we encountered several challenges that are being discussed below.

**Recruitment challenges:** Finding suitable participants necessitated a significant search effort, since the photo-based interview required a higher engagement than a mere questionnaire. Participants needed to be willing to invest their time and effort to reflect on the topic, take pictures and participate in an interview. Further, the photo-based qualitative interview is a new, unknown and uncommon interview method, which consumers were not familiar with. We attempted to motivate potential candidates by using internal and external incentives. To activate internal motivation, we underlined that participating in the research would enable participants to become aware of their own consumption habits and uses of fruits and vegetables; further, they could be creative and they would contribute to scientific research. The external incentive was either a € 50 voucher for a supermarket or a box of apple juice or bottle of wine from the university shop. We also created an information sheet that described the topic, who could participate, and what needed to be done.

**Comprehensible work assignment challenges:** After recruiting participants, we needed an extra appointment before the interview, in order to explain the work assignment. Since the work assignment would heavily influence what the participants photographed, the description needed to be adequately specific, but also leave room for creativity. We asked participants to express in pictures what fruits and vegetables meant to them. It turned out that this task was difficult for some participants, since it was too abstract. Therefore, we added concrete suggestions to the work assignment; participants could take pictures from different occasions when they used fruits and vegetables, document their experiences during shopping or typical everyday routines and take pictures from experiences in which they were happy or angry regarding the consumption of fruits and vegetables. Every participant received a leaflet that described the work assignment in detail.

**Technical challenges:** We experienced challenges related to the questions of which camera the participants should use, how much time they should have to take pictures, how many pictures they should take and how we should receive the pictures. We considered giving participants single-use cameras. This would have had the advantage that every participant would have used the same technology. However, the quality of pictures from single-use cameras is often rather poor. In addition, we wanted participants to take pictures in ways they were used to. This is why we allowed participants to choose which camera (mobile phone camera, digital camera) they wanted to use.

**Appropriate amount of time for participants to taking photos:** In general, the time given to participants to take pictures for photo-based interviews depends on the research question. In our project, since most people use fruits or vegetables at least weekly, we gave a time limit of two weeks. Another option would have been to ask participants how much time they need for their work assignment.

**Number of pictures:** We did not limit the number of pictures, which gave more freedom to participants. On the other hand, a limitation might have been useful, since it would have forced participants to select the most important situations and to think about which motives were worthwhile to be in the pictures. We gave every participant a flash drive onto which they could copy the pictures and then send the drives back to

us. Some who took only a few pictures also sent the pictures via e-mail. One older participant used a digital photo camera but was not able to transfer the pictures onto a flash drive or laptop. We met with him and transferred the pictures ourselves.

**Handling challenges with pictures during the interview:** For the interviews, we decided to print all the pictures, since printed pictures are easier to handle. They can be grouped together or compared with each other and can be easily handled by the participants (Stoetzer 2004, p. 367).

**Analysis challenges:** The photographs did not only serve as a request to do visual work during the interview; they were also data that needed to be systematically analyzed during the research process. The challenge for us was to combine picture and text analyses and to find a suitable approach for analyzing the photographs. So far, analysis methods and methodologies in the qualitative social sciences have been centered on spoken words and text. In recent years, scholars have expressed different opinions on the distinctions between pictures and texts and the ways in which meaning can be systematically extracted from visual data as opposed to text (e.g. Lobinger 2012, pp. 47-70; Bachleitner/Weichbold 2015). Approaches in the qualitative social sciences that address the analysis of visual data have recently emerged (Bohnsack 2005; Breckner 2012). However, these approaches focus on the detailed analysis of a single picture. When conducting a photo-based qualitative interview, a large number of pictures are produced. Analyzing hundreds of photographs in detail is not just immensely time consuming, it also does not take into account that pictures are usually provided in bulk. Considering the limited resources of most researchers, a more appropriate approach is needed. Another challenge is the lack of tools for picture analysis. Commercial picture analysis software, which is able to identify and count or measure objects, exists. There are even applications on mobile phones that can recognize faces or simplify search processes through image recognition. Nevertheless, software to supporting scientific interpretation only exists for text analysis and is not suitable for image analysis. For example, it is only possible to assign categories to the whole image, and only rectangular areas can be drawn and named. Image-editing programs can be used for some tasks, such as emphasizing details in the image. Apart from this, the interpretation process must be done manually. Briefly, based on the challenges we encountered, we propose that a suitable approach for evaluating the results of a photo-based qualitative interview should enable not just a quantitative description, but also a detailed and deep analysis. We propose that an analysis of a photo-based qualitative interview must be able to:

- consider the idiosyncrasies of a picture,
- handle a vast number of photos, and
- combine text and photo analyses.

## 6. Conclusion

Technical and digital developments in photography must be considered in the context of market research. Pictures nowadays are a central form of communication, meaning they contribute to the formation and building of the social world. The advantages of a photo-based qualitative interview are the active involvement of participants, the inclusion of otherwise inaccessible places and people and the direct, deep insights into participants' subjective perspectives, motivations, values, attitudes, learnings and memories. Market researchers can use photo-based qualitative interviews for product innovations, product developments, brand research, usability studies and product tests. However, photo-based qualitative interviews require a higher degree of involvement and creativity from participants. The challenges of analyzing the data shows that this area of research has difficulties with visual data, especially the handling of a huge number of pictures without compromising the qualitative aspect of analysis. In future, as visual data continues to shape society, it will be important to develop improved understandings and theories of the ways in which visual data conveys meaning (or how social actors infer meaning from it). The systematic analysis of data, as it is produced during a photo-based qualitative interview, is still maturing and needs further development.

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## Literature

Arndt, J. (1979): Family life cycle as a determinant of size and composition of household expenditures, in: *Advances in Consumer Research* (Volume 6), pp. 128-132.

Bachleitner, R./Weichbold, M. (2015): Zu den Grundlagen der visuellen Soziologie: Wahrnehmen und Sehen, Beobachten und Betrachten, in: *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 16 (2), Art. 10.

Bohnsack, R. (2005): Standards nicht-standardisierter Forschung in den Erziehungs- und Sozialwissenschaften, in: Gogolin, I./Krüger, H.-H./Lenzen, D./Rauschenbach, T. (eds.): *Standards und Standardisierungen in der Erziehungswissenschaft*, Wiesbaden, pp. 63-81.

Bourdieu, P. (1983): *Eine illegitime Kunst: Die sozialen Gebrauchsweisen der Photographie*, Frankfurt am Main.

Breckner, R. (2012): Bildwahrnehmung – Bildinterpretation, in: *Österreichische Zeitschrift für Soziologie*, 37 (2), pp. 143-164.

Buchner-Fuhs, J. (1997): Die Fotobefragung - eine kulturwissenschaftliche Interviewmethode?, in: *Zeitschrift für Volkskunde* (II), pp. 189-216.

- Collier, J. (1957): Photography in Anthropology: A Report on Two Experiments, in: *American Anthropologist*, 59 (5), pp. 843-859.
- Fuhs, B. (1997): Fotografie und qualitative Forschung: Zur Verwendung fotografischer Quellen in den Erziehungswissenschaften, in: Friebertshäuser, B./Prenzel, A. (eds.): *Handbuch Qualitative Forschungsmethoden in der Erziehungswissenschaft*, Weinheim und München, pp. 265-285.
- Goffman, E. (1981): *Geschlecht und Werbung*, Deutsche Erstausgabe, Frankfurt am Main.
- Harper, D. (2000): Fotografien als sozialwissenschaftliche Daten, in: Flick, U./Kardoff von, E./Steinke, I. (eds.): *Qualitative Forschung: Ein Handbuch*, Reinbek, pp. 402-416.
- Jacknis, I. (1988): Margaret Mead and Gregory Bateson in Bali: Their Use of Photography and Film, in: *Cultural Anthropology*, 3 (2), pp. 160-177.
- Kolb, B. (2008a): Die Fotobefragung in der Praxis. <https://www.univie.ac.at/visuellesoziologie/Publikation2008/VisSozKolb.pdf>, Access: 03.03.2020.
- Kolb, B. (2008b): Involving, Sharing, Analysing - Potential of the Participatory Photo Interview, in: *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 9 (3), Art. 12, <http://www.qualitative-research.net/index.php/fqs/article/view/1155/2564>, Access: 08.01.2020.
- Kroeber-Riel, W./Gröppel-Klein, A. (2013): *Konsumentenverhalten*, 10., überarb., aktualisierte und erg. Aufl., München.
- Lobinger, K. (2012): *Visuelle Kommunikationsforschung: Medienbilder als Herausforderung für die Kommunikations- und Medienwissenschaft*, Wiesbaden.
- Malinowski, B. (ed.) (1981): *Korallengärten und ihre Magie: Bodenbestellung und bäuerliche Riten auf den Trobiand-Inseln*, Frankfurt am Main.
- Mensink, G./Burger, M./Beitz, R. (2002): *Beiträge zur Gesundheitsberichterstattung des Bundes: Was essen wir heute?* Berlin.
- Mills, S./White, M./Wrieden, W./Brown, H./Stead, M./Adams, J. (2017): Home food preparation practices, experiences and perceptions: A qualitative interview study with photo-elicitation, in: *PloS one*, 12 (8), e0182842.
- MRI 2008 (2008): *Nationale Verzehrstudie II: Ergebnisbericht, Teil 1, Teil 2*, [www.was-esse-ich.de/uploads/media/NVS\\_II\\_Abschlussbericht\\_Teil\\_1\\_mit\\_Ergaenzungsbericht.pdf](http://www.was-esse-ich.de/uploads/media/NVS_II_Abschlussbericht_Teil_1_mit_Ergaenzungsbericht.pdf) [www.was-esse-ich.de/uploads/media/NVSII\\_Abschlussbericht\\_Teil\\_2.pdf](http://www.was-esse-ich.de/uploads/media/NVSII_Abschlussbericht_Teil_2.pdf), Access: 08.01.2020.
- Müller, M. R. (2012): Figurative Hermeneutik: Zur methodologischen Konzeption einer Wissenssoziologie des Bildes, in: *Sozialer Sinn*, 13 (1), pp. 129-161.
- Müller, M. R. (2016): Bildcluster: Zur Hermeneutik einer veränderten sozialen Gebrauchsweise der Fotografie, in: *Sozialer Sinn*, 17 (1), pp. 95-141.
- Naderer, G./Balzer, E. (eds.) (2011): *Qualitative Marktforschung in Theorie und Praxis*, 2nd ed.. Wiesbaden.
- Patricia, G. E./Vizcarra, M./Palomino, A. M./Valencia, A./Iglesias, L./Schwingel, A. (2017): The photo-elicitation of food worlds: A study on the eating behaviors of low socioeconomic Chilean women, in: *Appetite*, 111 pp. 96-104.

Ramalho, J. d. A. M./Lachal, J./Bucher-Maluschke, J. S. N. F./Moro, M.-R./Revah-Levy, A. (2016): A qualitative study of the role of food in family relationships: An insight into the families of Brazilian obese adolescents using photo elicitation, in: *Appetite*, 96 pp. 539-545.

Schreier, M. (2011): Qualitative Stichprobenkonzepte, in: Naderer, G./Balzer, E. (eds.): *Qualitative Marktforschung in Theorie und Praxis*, Wiesbaden, pp. 241-256.

Seel, B. (2004): Ernährung im Haushaltszusammenhang – Befunde und ökonomische Erklärungsansätze zu geschlechtsdifferentem Verhalten, in: Universität Hohenheim (ed.): *Hohenheimer Beiträge zu Gender und Ernährung*, pp. 8-49.

Stoetzer, K. (2004): Photointerviews als synchrone Erhebung von Bildmaterial und Text, in: *ZBBS*, 5 (2), pp. 361-370.

Wuggenig, U. (1989): Die Photobefragung als projektives Verfahren, in: Hoffmann-Nowotny, H.-J. (ed.): *Kultur und Gesellschaft: Gemeinsamer Kongress der Deutschen, der Österreichischen und der Schweizerischen Gesellschaft für Soziologie*. Zürich 1988; Beiträge der Forschungskomitees, Sektionen und Ad-hoc-Gruppen, Zürich.

## Keywords

Photo-based qualitative interview, visual data, photographs, consumer behavior, market research, fruits and vegetables, food

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