Using Participatory Visual Methods to Explore Multi-Local Living Arrangements - The Example of Work-Life Biographies and Reflexive Photography

Lisa Garde1 and Lena Greinke, Dr2

Abstract
This paper explores work-related multi-locality – living in several places for work-related reasons – using qualitative interviews including participatory visual methods. To give space to multi-locals as people with complex living and working arrangements and to support their narratives, the visual methods work-life biographies and reflexive photography were used during interviews. After introducing the state of research on work-related multi-local living and visual methods, two German case studies, the one in the city of Stuttgart in Baden-Württemberg, the other in the rural district of Diepholz in Lower Saxony, are described. The aim of this paper is to ascertain the value of using visual methods to explore multi-local living arrangements. The research questions are: (1) Which (specific) elements do multi-local employees visualise when using work-life biographies and reflexive photography? (2) Which new insights into multi-local living arrangements do the two methods provide? (3) What are the pros and cons of using such methods within qualitative interviews? The study shows that multi-locals used common thematic elements when using the visual methods: For example, especially words, numbers, specific signs and bars in the case of biographies and certain situation, people and objects in case of the photographs. Furthermore, both methods allowed new insights into multi-local living arrangements, such as their temporal and spatial dimensions, the interplay between living and working arrangements over time as well as the place attachment of multi-locals. Using visual methods during qualitative interviews provided clear added value in studying multi-locality, as it created a suitable interview introduction, reinforced spoken statements or facilitated the discussion of sensitive topics. Participatory visual methods can be used to explore a range of topics in qualitative studies looking at participants in complex situations. For multi-locality studies in particular, visual methods can be beneficial in stimulating and addressing a combination of spatial and temporal thinking.

Keywords
multi-local living, timelines, photos, participatory visual methods, problem-oriented interviews

Introduction
Multi-locality, i.e. living in and between two or more residences (Hilti, 2009), is considered in research and practice as a phenomenon symptomatic of late modern societies. As a research field rooted in several disciplines, “Residential Multi-locality Studies” (Wood, et al., 2015) is being increasingly focused on in spatial science using qualitative and quantitative research methods (e.g., Di Marino & Lapintie, 2018; Plöger, 2020; Tippel, et al., 2017). As a facet of spatial mobility, multi-local living is distinct from daily commuting (circulation) and

---

1ILS – Research Institute for Regional and Urban Development, Dortmund, Germany
2Leibniz University Hannover, Institute of Environmental Planning, Hannover, Germany

Corresponding Author:
Lisa Garde, ILS – Research Institute for Regional and Urban Development, Brüderweg 22-24, Dortmund 44135, Germany.
Email: lisa.garde@ils-research.de
relocating (migration), since multi-locals have more extended commuting periods and do not relocate permanently (Weichhart, 2009).

Causes differ significantly: they can be leisure-, work-, training-, family-, partnership-, or origin-related and may even overlap (ARL, 2021). This paper focuses primarily on work-related multi-local living arrangements due to their growing importance in western industrial societies. Labour market flexibilisation — amongst others as a result of globalisation — as well as societal and demographic changes are leading to more and more people living multi-local for work-related reasons (Dittrich-Wesbuer, et al., 2015). Covering many different occupational groups, particularly in knowledge-based sectors (Bauder, 2015), and complex in socio-spatial terms, work-related multi-locality is therefore an upcoming topic for researchers and planners that needs to be studied in greater detail (Di Marino & Lapintie, 2018).

To explore work-related multi-locality from a participant’s perspective, several existing studies have used qualitative research, for example interviews with multi-local employees (Hilti, 2009; Tippel, et al., 2017): “by means of interviews, for example, through stories of the day’s events both here and there, and based on narratives of concrete activities, it is possible to reconstruct everyday routines, rituals and spatio-temporal rhythms” (Schier, Schlinzig et al., 2015). While these studies have provided important insights for practice and research, the use of “standard” interviews also generates challenges such as addressing sensitive experiences in people’s private lives, for example the death of loved ones or divorce, or accessing chronologically related experiences dating back several years (Kolar, et al., 2015).

Multi-locals are particularly challenging to study as they themselves need to remember their complex way of life and immerse the interviewers in it. Multi-locality is characterised by a tension between spatial mobility and stability (Dittrich-Wesbuer & Kramer, 2014), with multi-locals living in the here, there and in-between and most of them possibly feeling attached to several places (ARL, 2021). Furthermore, as their living arrangements are characterised by fluidity and fragility (Schier et al., 2015), the overall arrangement of the different places of living and the relationships between them must always be taken into account when studying multi-locality (Dittrich-Wesbuer & Kramer, 2014).

We used participatory visual methods to showcase multi-locals’ narratives of their complex living and working arrangements. The visual methods were embedded in problem-oriented interviews, including narrative elements, with multi-local employees from knowledge-based sectors. As the study is embedded in spatial sciences and multi-locality studies, we are interested in the spatial and time-related aspects of multi-local living and see the following two visual methods to be particularly well suited: work-life biographies and reflexive photography (Dirksmeier, 2007b). The first involves interviewees writing down their residential and work biographies above and below a printed timeline and explaining the underlying decisions. Such timeline-based methods during qualitative interviews have so far been applied more in health and social research (e.g., Schubring, et al., 2019; Kieslinger, et al., 2020; Kolar, et al., 2015). The second method involves interviewees being asked to take photos on specific topics and sending them to the interviewers for use as a starting point in the interviews. Up to now, the method has been mainly used in cross-cultural studies (Dirksmeier, 2007b).

In this paper we explore the value of using participatory visual methods to study multi-local living arrangements. The research questions are: (1) Which (specific) elements do multi-local employees visualise when using work-life biographies and reflexive photography? (2) Which new insights into multi-local living arrangements do the two methods provide? (3) What are the pros and cons of using such methods within qualitative interviews?

We start by introducing the state of research on work-related multi-local living and on visual methods, before describing the two German case studies: the city of Stuttgart in Baden-Wuerttemberg and the rural district of Diepholz in Lower Saxony. We go on to present the findings regarding the (specific) elements multi-locals visualise when using visual methods, providing new insights into multi-local living arrangements and looking at the pros and cons of using visual methods within qualitative interviews. We then discuss the presented findings, before presenting the conclusion and outlook.

Work-Related Multi-Local Living

As a socially relevant phenomenon, multi-locality has developed into a standalone research field, namely “Residential Multi-locality Studies” (Wood, et al., 2015). Work-related multi-locality is linked to several other research disciplines, for example housing, household and family research (Hilti, 2009; Schier et al., 2015; Wood et al., 2015), migration and mobility research (Kilkey & Palegna-Möllenbeck, 2016; Nadler, 2014) and increasingly focused on in spatial sciences (Di Marino & Lapintie, 2018; Garde, 2021; Greinke, 2020; Othengrafen, et al., 2021; Plöger, 2020; Tippel, et al., 2017).

Multi-locals are represented in almost all age groups, social classes and occupational profiles (ARL, 2021), but especially in knowledge-based sectors (Bauder, 2015). The increasingly global and spatial division of labour is leading to people’s lives taking place in several locations (Dittrich-Wesbuer, et al., 2015). In addition, labour markets are becoming more flexible, meaning that temporary employment relationships are becoming more usual, necessitating more work-related mobility and frequent changes of jobs (Greinke, 2020; Plöger, 2020). With lifelong work at a single location for a single employer becoming increasingly rare, today’s work biographies often feature discontinuities and play out at different locations, in turn leading to discontinuous residential biographies (ARL, 2021).

Multi-local living arrangements are factors shaping certain areas in industrial countries. In the same vein, spatial conditions influence the decision to become or remain multi-local.
Because of skills shortages in specific sectors such as information technology or engineering, employers in metropolitan regions but also in rural areas are increasingly being forced to recruit nationally or even internationally (Garde, 2021; Greinke, 2020; Plöger, 2020).

Multi-local living not only affects the multi-locals, but also their families, partners and friends, as they are present and absent for prolonged periods (Van der Klis & Karsten, 2009). Nevertheless, multi-locality is seen as a way to help employees stay connected to family members or acquaintances, specific infrastructures or property (Schier, Hilti, et al., 2015).

Multi-locals constantly establish new spaces in specific spatial-temporal patterns. These patterns are a constituting element of multi-locality: space is important, because multi-locals’ everyday lives are characterised by being present or absent due to peoples’ corporeality. Time is important as it takes time to cover the distance between places (Kramer, 2012). The ‘production’ of these temporally used spaces takes place through their physical and virtual mobility as well as through their anchoring in these places. With space, we mean the socially constructed space and not the ‘container space’ or territorial borders (Löw, 2001).

### Participatory Visual Methods

Of the different methods used to study work-related multi-locality, qualitative interviews are widely established (e.g., Hilti, 2009; Plöger, 2020; Tippel, et al., 2017). They allow a lot of information to be gathered from the perspective of study participants. In various research fields – including spatial-related studies such as multi-locality studies –, researchers have started using participatory visual methods during interviews. This paper introduces possible visual methods for use in exploring work-related multi-locality. We start by presenting various visual methods used in spatial-related studies, before going on to introduce timeline-based methods and photography-based methods.

### Different Visual Methods

We used Prosser and Loxely (2008) as our theoretical reference point. The two identified various forms of visual data and their collection methods, including ‘found data’, ‘researcher-created data’ and ‘respondent-created data’. Looking first at ‘found data’, several spatial-related studies have used personal items such as old photo albums or calendars (e.g., Kowald & Axhausen, 2016) to support interviewees’ ability to reconstruct, for example, how and where they previously lived.

‘Researcher-created’ data is characterised by the researcher collecting or creating data and reflecting on it. For example, by taking photos of the same site at certain intervals, Sieg mund (2020) was able to analyse neighbourhood development processes, while Vergara (2014) analysed the steady dissolution of neighbourhood communities.

Additional spatial-related studies have used a range of ‘respondent-created’ visual data collection methods. Examples are “mental maps” (Nadler, 2014), “mobility maps” (Weidinger, et al., 2019) or “emotion maps” (Merla & Nobels, 2019) where participants draw a map of specific places, associating them with subjective emotions. Respondent-generated visual material is seen to give researchers closer insights into interviewees’ lives from their own perspective (Oldrup & Carstensen, 2012), often functioning as ‘speech support’ (Merla & Nobels, 2019, p. 84).

Other methods create data that is partly researcher- and partly respondent-created. For example, “comic book-like sketches” have been used as a participatory element to rate the importance of multi-locality aspects (Lange, 2018). Further studies have used the “socio-spatial network game” (Merla & Nobels, 2019; Schier et al., 2015) during interviews, using such items as board game pieces or model animals to make it easier for interviewees to talk about residences, or important people in their lives.

We now briefly introduce the methods referenced in this paper – timeline-based methods and photography-based methods –, both of which produce respondent- and researcher-created data, though the former dominates.

### Timeline-Based Methods

Up to now, timeline tools were applied in spatial-related studies during quantitative surveys to boost memory performance when studying, for example, mobility biographies where mobility tool ownerships or events such as relocations are collected (Beige & Axhausen, 2008; Schoenduwe, et al., 2015).

The use of timeline tools is also well-established in qualitative interviews (Bagnoli, 2009; Chen, 2018; Kolar, et al., 2015), albeit more in social and health research and rarely in spatial science or multi-locality studies (Gleich, 2020). Also termed “life history calendar” (Harris & Parisi, 2007), “take-home timeline” (Bremner, 2020), “(im)mobility biography” (Kieslinger, et al., 2020), “biographical mapping” (Diehl & Lindenthal, 2021; Schubring, et al., 2019) or “biographical chronology” (Gleich, 2020), they address one or more topics such as key events in participants’ lives, health status or relocations. The timelines are compiled mainly by the interviewees. Support material ranges from blank sheets of paper and a simple pen up to printed timelines, tapes or coloured cards (Kieslinger, et al., 2020).

Using timeline tools is especially seen to be useful when studying biography-related questions, because biographical research implies that study participants put specific events affecting their lives in relationship to each other (Rosenthal, 1993) – such as the birth of a child in family biographies, house moves in residential biographies or job changes in work biographies. Biographical research also investigates how past events have influenced past, present and future decisions (Schütze, 2008). The participants’ biographical narratives are
always related to their temporal, spatial and social contexts (Jackson & Russel, 2010). Narratives refer to the expression and participant’s subjective meaning of the experienced events, but can also consist of reflective passages offering possible insight into the extent to which events might have developed differently if participants had made other decisions (Schütze, 2008).

Timeline tools are considered to have a positive impact on participants’ memories and on interview dynamics, providing them with support for their narratives, improving the mutual understanding of interviewer and participants and allowing participants to be more active in the research process (Schubring, et al., 2019). Furthermore, participants can take the role of experts in their narratives. Timelines help moderate the role differences between participants and interviewers, strengthening their rapport (Chen, 2018; Schubring, et al., 2019).

Problems may occur when interviewees have difficulties with temporal imagination or written language (Kolar, et al., 2015). Furthermore, interviewers and interviewees need to have sufficient time and be highly concentrated for a long period (Kieslinger, et al., 2020).

Photography-Based Methods

The four distinct photography interviewing methods in visual sociology are photo-elicitation, photo novella (aka photo-voice), auto-driving, and reflexive photography (Dirksmeier, 2007a; Meo, 2010). In photo-elicitation, the interviewer uses specially taken photographs to get the interviewee to answer questions (Harper, 2000). The photo novella method, by contrast, is more about socio-political interventions than scientific investigation, with participants photographing their lifeworld over a longer period to visualise marginality (Dirksmeier, 2007a; Glaw et al., 2017). In auto-driving, the researcher photographs the interviewees in a situation that is discussed in the subsequent interview. These methods thus cover quite specific topics (Dirksmeier, 2007a).

Originally used in cross-cultural studies, reflexive photography combines interview and photography approaches to form a coherent methodology. Interviewees are asked to take photos on given topics and send them to the interviewers before the interview. In the interview, the photos are then used as a narrative impulse or starting mechanism (Dirksmeier, 2007b).

Reflexive photography is a way to quickly capture visual information in a technically simple manner (Dirksmeier, 2009). Using this method, the roles of the interviewee and the scientific observer are reversed (Amerson & Livingston, 2014), with the interviewee taking an active part (Eberth, 2018). Interviewees act as experts for their photos, sharing their intentions and interpretations and independently and subjectively selecting subjects (Amerson & Livingston, 2014; Schulze, 2007). They are stimulated to think visually and make reflective statements about their pictures (Dirksmeier, 2009). Moreover, the pictures provide insights into their perceptions (Amerson & Livingston, 2014), in our case helping researchers to understand multi-locals’ social and personal context (Latham, 2004) and giving them the opportunity to directly recognise significant places (Johnsen, et al., 2008). Therefore, the method is particularly well suited for spatially related questions (Dirksmeier, 2013). As feelings and thoughts can be visualised by this method (Glaw, et al., 2017), researchers thus gain direct insights into the living environment of multi-locals. The challenge for the researcher is to not over-interpret the interviewees’ pictures. The actual interpretation of the images should be left to the interviewees (Krisch, 2002).

Visual methods for studying multi-locality should be further explored, as the literature review reveals major research gaps, especially with regard to the temporal and spatial dimensions of multi-locality. Furthermore, as studies on multi-locality have rarely used timeline-based and photography-based methods, there is a research gap regarding the pros and cons of using such within qualitative interviews.

Case Studies and Methods

This paper combines selected results from two doctoral theses dealing with work-related multi-locality. Both used participatory visual methods to explore multi-local living arrangements. The German city of Stuttgart in Baden-Württemberg (Garde, 2021) and the rural district of Diepholz in Lower Saxony (Greinke, 2020) were selected as case studies. The aim was to explore the living and working arrangements of multi-local employees as well as the interactions between multi-locality, operational approaches and regional developments. In both theses, problem-oriented guideline-based interviews with narrative elements including visual methods (Helfferich, 2011; Witzel, 2000) were used on multi-local employees. One study used the visual method work-life biographies and the other reflexive photography (Dirksmeier, 2007b).

All interviews were conducted by the authors in German, with any citations translated into English by the authors. They were recorded, fully transcribed and then analysed with the MAXQDA qualitative content analysis software (in accordance with Mayring, 2010).

Multi-Local Living in Stuttgart

The first study focuses on Stuttgart, as a higher share of multi-local employees can be expected in such a large city with international companies (ARL, 2021). Due to demographic change and a high number of jobs, employers are increasingly facing skills shortages (IHK Region Stuttgart, 2019) and are thus forced to recruit (inter-)nationally, leading to many multi-local employees.

The Stuttgart sample was selected using mailing lists of academic networks as well as posts in social media groups. Interviewees were people living and working in Stuttgart, with
A further residence outside the region. In 2018 and 2019, 24 interviews lasting 80–120 minutes were conducted with multi-locals from knowledge-based sectors. They were between 23 and 52 years old (median age 31), 16 were male and eight female. Interviewees had lived multi-locally for between one and 13 years.

The focus of the Stuttgart case was to explore the past, present and planned living and working arrangements of multi-locals and the underlying decision-making processes. To stimulate and illustrate the participants’ narratives, timeline-based method work-life biographies was used during interviews. This method consists of a two-dimensional printed timeline, in which participants have to write down and explain subjectively meaningful events in their educational and employment phases in life (work biography) as well as places of residence (residential biography) during the interviews (see Figure 1).

At the beginning of each interview, participants were given a red and a black pen and the timeline printed in the middle of an A3-sized, landscape-oriented sheet of paper. The interviewees were first asked by the interviewer to describe their work biography: “To start with I am interested in your work biography. Therefore, you have this timeline, which is going to serve as a memory aid during the interview. Please write down on the upper part your secondary and tertiary education, stating what you studied, as well as when and for which companies you have since worked. Please tell me why you chose these studies and jobs.” The interviewees were given up to 20 minutes to describe and write down with the red pen their educational and employment phases, after which the interviewer asked questions such as “Why did you choose this job?” to understand the underlying decisions.

Interviewees were then asked to write and describe their residential biographies: “I am now interested in where you have lived so far. Please write it down below the timeline, stating where you have lived from birth on and why.” Depending on whether the interviewees felt comfortable and willing to talk, follow-up questions such as “Why did you move to this city?” or “Why did you choose this flat?” were posed to gain insights into participants’ perception.

Use of different-coloured pens to write down the biographies helped distinguish them visually. Interviewers did not specify which information was to be written down and did not interrupt the narratives, allowing interviewees to concentrate on their line of thought. Some interviewees asked questions, for example whether they should write down more information or whether the interviewer could read what they had written.

To ensure anonymity, interviewees were assigned made-up names. In the biographies presented, square brackets indicate anonymised information such as peoples’ or companies’ names and spatial units smaller than cities, e.g., city districts (see Figure 1). As complete anonymisation would have made the biographies less meaningful, interviewees signed a privacy declaration allowing publication in such an anonymised way.

The interviewees’ visualisations of their work and residential biographies provided insights into their associations and meanings of events (Bagnoli, 2009). At the same time, the visualisations allowed a shared analysis and interpretation by both, interviewees, and interviewers (Kieslinger, et al., 2020), with a combination of thematic and visual analysis applied (Kolar, et al., 2015). In the thematic analysis, the narratives and contents of the work-life biographies with thematic elements common to the interviewees were examined. The visual analysis examined what interviewees had (not) visualised within the timelines and how they visualised events (Kieslinger, et al., 2020).

Figure 1. Oliver’s work-life biography (colour legend: red = work biography; black: = residential biography; original chart).
Multi-Local Living in Diepholz

Analyses have shown that rural areas are also greatly affected by multi-locality (ARL, 2021; Lange, 2018). Diepholz, a rural district in the northwest of Lower Saxony in Germany, was selected as a case study to explore work-related multi-local living arrangements.

As a district, Diepholz is characterised by a north-south divide, with its southern municipalities more rural (Landkreis Diepholz, 2018; Lange, 2018). However, commercial and industrial parks are also to be found in the Diepholz district (Lange, 2018), leading to the expectation that the internationally active companies predominantly employ multi-locals (Greinke, 2020).

Within the district, 15 multi-locals were recruited via an online survey sent out to 16 mainly industrial companies where, according to the mayor, multi-locals were expected to be employed. Most of the interviewees were in management or in higher-level positions (e.g., project leaders). 13 males and two females were interviewed, with each interview lasting 60–120 minutes. The youngest was 33, the oldest 64 (median age: 50) (Greinke, 2020). The multi-locals had lived in two or more places between 6 months and 16 years.

To encourage interviewees to reflect more deeply, reflexive photography was used. This involved the researcher phoning them up prior to the interview and asking them to send in three pictures of their everyday life at each of their residences (in total up to six photos) (Eberth, 2018; Greinke, 2020), capturing life there and not “in between”. No specifications were made with regard to picture contents. Taking their photos with a device of their choice, the multi-locals were asked to write down their impressions, reasons, and reflections for each photo (Dirksmeier, 2007b). In addition, the pictures were to be labelled with the date, time and location where they were taken. The photos were printed out and brought along to the interview appointments (Greinke, 2020). Interviews kicked off with the interviewees’ pictures, with them being openly asked to explain “Why did you choose these photos?” (cf. Greinke, 2020). This was followed by questions about interviewees’ multi-locality and their everyday life to explore their meaning-making processes. In addition, they were asked about their working life and multi-locality in the company. Furthermore, their civic involvement was discussed with their socio-demographic data and information on the municipality as background. There were few questions from the interviewees about the use of the photos and whether, for example, they had to be recent photos or whether older ones could also be used.

To ensure anonymity, specific information on the photos such as the license plate in Figure 2 was blacked out, as otherwise identities could by revealed via social media and the internet. In order not to violate the ethics of participatory visual research, the consent was also obtained to publish the photos, as complete anonymization would have changed the results or made them less informative.

The photographs were then evaluated with the help of image interpretation (in accordance with Brake, 2009; Breckner, 2012; Schulze, 2007), allowing interviewers to leave the actual interpretation of the images to the photographer. In a first step, the contents of the images were described in detail (for example, landscape, people and objects). Characteristics and surprising features were noted. In addition, the perspective, (main) motifs, effects, statements and special features were analysed, with the focus put on the content (Schulze, 2007). Other effects (e.g. image composition, choice of colour, the incidence of light, etc.) were not further analysed.

Findings on Studying Work-Related Multi-Locality Using Visual Methods

Using Prosser and Loxley’s (2008) identified forms of visual data as reference point and drawing on the empirical material,
we firstly explore which (specific) elements were visualised using work-life biographies and reflexive photography during interviews. It then presents new insights into multi-local living arrangements determined through the use of the two methods. Therefore, it primarily presents the methods used in spatial-related studies and shows selected insights. Afterwards, we look at the pros and cons of using such methods within qualitative interviews.

**Visualisations in the Biographies and Photos**

Even though the interviewees were not given precise instructions on what to include in the biographies or what to photograph, common thematic elements were to be found. The visual analysis of the timelines showed that all had in common that numbers, whole words (e.g., ‘Bachelor of Science’) or abbreviations (e.g., ‘B.Sc.’) were used to describe the work and residential biographies. Aspects mentioned in work biographies varied from the dates of subjectively important events such as graduating from university, the names of places, up to positions and company names. Within the residential biographies, key dates, e.g., date of birth or relocations, as well as names of places, housing type (e.g., “two-room flat”) or the purpose of residence (e.g., “internship”) were mentioned. In both, written dates seemed to serve as landmarks and a memory aid orienting participants during interviews (Glasner & Van der Vaart, 2009). Interviewees also used lines and bars when writing down their biographies. Horizontal ones were used to highlight, for example, the time spent at one employer or one residence, whereas vertical ones denoted changes of jobs or residences. Also, signs like dots, circles, stars and hearts were used to highlight events or attachments to places or people. Daniela (see Figure 3) used stars to mark events such as her own birth or the start of a job. Similarly, she used arrows to denote stages in her biographies and words to describe these stages.

Turning to the photographs, most of them were taken explicitly for the interviews, though some were older. Almost all photos were taken with a mobile phone or a digital camera (see Figures 2, 4, 5, 6, and 7). The framing is often stage-like, focusing on a certain situation or certain people and objects. Based on the image interpretation, photographs were sorted into one of four main categories (adapted from Dirksmeier, 2007a; Schulze, 2007): “Mobility,” “Social Relations,” “Working World” and “Living World” (Greinke, 2020) (see Figures 2 and 4). Similarities and differences between the pictures at the respective locations and the number of photographs in the categories were analysed.

**New Insights into Multi-Local Living Through Visualisations**

The biographies and photos led to new insights, especially time-related and spatial ones into the living and working arrangements of multi-locals as well as their place attachment.

![Figure 3. Daniela’s work-life biography (colour legend: red = work biography; black: residential biography; original chart).](image-url)
Concerning new time-related insights, the thematic analysis of the biographies showed that they were especially useful for studying multi-locality over time, as past, present and also future living and working arrangements were to be found in the biographies. While writing, the interviewees described the underlying reasons for their decisions. For example, a 47-year-old male explained when and why his current multi-local living arrangement started: “[Writes on the timeline] We lived in Stuttgart for 3 years up to 2017. Then, we decided to move back closer to home, to Münsterland [continues writing]. For private reasons and, in the case of my wife, for professional reasons. And then I agreed at work that I would mainly work private reasons and, in the case of my wife, for professional in Stuttgart for 3 years up to 2017. Then, we decided to move living arrangement started:”

In some biographies, ideas about the preferred future were also visualised: As seen in Figure 3, Daniela drew arrows in her residential biography extending beyond the end of the printed timeline and she explained “Every weekend, ify to our main residence in Hamburg […]. I hope that it is limited in time […]. I’m really annoyed by the commute; extremely (laughs). The first year I thought ‘Yay, this is working quite well’, but in the long run it’s ultra-exhausting […]. We want to have our centre of life here, because we see our future in Hamburg and not in Stuttgart. I feel comfortable in Hamburg and it’s the city of my heart.” These and other narratives underlined whether and why the participants planned their multi-local living to be temporary.

In the selection of the photographs, it was noticeable that many showed interviewees’ present situations. For example, a 39-year-old male said: “Actually, these pictures pretty much reflect my everyday life. This [picture], for example, is the flat here […], my secondary residence. I spend most of my time in the office when I am here, and in the evenings, I go jogging, usually alongside the river”. In rare cases, past situations were used to explain multi-local living arrangements, as one 50-year-old male stated while showing the photo and describing his former profession (see Figure 5): “Before that, I was an operator. That meant I was out in the field in the oil and gas industry, as you can see here [points at the photo], for example, in the offshore sector in the North Sea”. All interviewees talked about their preferred working and living futures and some even represented it in photos. For example, some chose photos of their main residence (see Figure 6), making it clear in their narratives that this was their home and would always be so. Reasons given were that their families, partners or friends lived there, that they did not want to give them up, or that the main residence was the centre of their lives. Even though most photos showed present situations, the photos also encouraged people to talk about their ideas for the future.

Turning to spatial insights, most biographies included the places of past and current residences or employers as well as further spatial aspects such as the type of flat. Furthermore, it was particularly interesting to see whether and how the interviewees represented their multi-local living with the visual methods. Within the residential biographies, multi-locality was in some cases referred to in words, e.g., “main residence” and “secondary residence” – underlining living in two places, but also denoting a hierarchy. Others used “parallel”, as seen with Daniela in Figure 3: “Stuttgart, 2017 parallel HH [Hamburg]”. She also used parallel horizontal lines to denote living in two places at the same time. In particular, interviewees with two or more fixed residences at the same time mapped their multi-locality. By contrast, interviewees sleeping in a hotel or on a friend’s couch while working in Stuttgart did not map this multi-locality. Their narratives made clear that they did not see themselves as “living in several places”, but rather as “living in one place and working in another”.

Additionally, residential biographies can consist of different phases of mono-local and multi-local living. One 40-year-old male had lived at his parents’ house for his whole childhood and youth, but multi-locally several times since leaving school. He explained: “Born and raised in Darmstadt [points to the residential biography]. After that, I had a whole series of long-distance relationships. And during my community service in Hamburg, I continued to live in Darmstadt. If you look at it that way, I never noticed that I have always lived multi-locally.” These findings underline the spatial extent and fluidity of today’s residential biographies as well as the temporality of multi-locality.

The timelines also visualise that residential and work biographies are often correlated, with workplace and residential changes often occurring simultaneously. Nevertheless, the narratives are important for understanding the motives behind changes of jobs and residence, for example, whether interviewees moved because of the job or chose the job because of where they (wanted to) live. Figure 1 revealed that Oliver’s studies and jobs coincided with relocations to the cities in question and he narrates: “I went to Dresden to study computer science […]. Then I spent a year doing research in the USA […]. I went back to Dresden, because I thought Dresden was very nice and I had my previous girlfriend there. So, I started looking for a job there […]. In 2016, I saw the position in Stuttgart and that was exactly what I wanted to do and I moved here for it.”

The photos also gave new insights into spatial contexts, representing the multi-local living arrangements. Indeed, most interviewees took pictures at both residences. Nearly all began describing their lives with a picture of the main residence. For example, one 54-year-old male started the interview by saying: “Let’s perhaps start with the flat here. You can see it here from the side. This is where it was photographed from”. After that, most interviewees went on to describe their lives at the secondary residence. Interestingly, some of the photos of the different residences resembled each other. For example, some interviewees showed outside pictures of both residences (see Figure 6). However, the photos of the main residence tended to be more private, for example including pictures of babies, family and friends, or pets, whereas those of the secondary residence generally referred to work (see Figure 5).
residences. Furthermore, the photos represented the spatial organisation of the multi-local living arrangements, with some pictures showing for example “connecting elements” such as cars or mobile phones (see Figure 2).

The photos and biographies also underlined new insights into multi-locals’ attachment to their places of residence, which varied from social contacts, specific infrastructures and landscape features to property ownership. The biographies emphasised place attachments and multi-local decisions, with signs like a heart denoting a partner or family members living at one of the residences, making it clear that multi-locality does not only affect the multi-locals themselves. Other interviewees underlined their attachment by writing such words as “boyfriend” or “own house” – the latter denoting a property-related attachment. Some biographies and narratives revealed that interviewees had lived their whole lives or several years within the same city or had worked for the same company for several years, underlining a biography-related attachment. Furthermore, biographies can underline an attachment to several places. As mentioned before, Daniela would like to end the multi-locality and just live in Hamburg. But her work biography showed that she had worked for the same employer since graduating, to whom she was strongly attached. She cannot imagine leaving her company yet and explains “I have a very good job in Stuttgart and wouldn’t
want to give it up. That’s why I still live in Stuttgart during the week.”

Turning to the reflexive photography, the attachment became clear through the selection of photos: most interviewees took pictures of their main and secondary residence (see Figure 6). However, looking at the number of photos, it was obvious that they took more photos with friends at their main residence than at their secondary one. The interviewees took no pictures of their families at their secondary residence but more of their work (environment). This confirmed the stronger emotional and place attachment to the main residence and to the family and friends there, whereas a weaker attachment to the second residence was observed. The descriptions provided by the interviewees underlined this, with most of them saying they had taken pictures to show where and how they lived. For instance, one 41-year-old male explained while looking at a picture of his hometown: “You have your family and friends here. For me, this is my home”. Furthermore, the photos showed circumstances representing partner- or family life, making it clear that multi-locality not only affected the people themselves, but also their families, partners and friends living at one of the places of residence where the multi-locals are present and absent for prolonged periods.

**The Pros and Cons of Using Visual Methods**

Using visual methods during qualitative interviews represented a clear added value in studying multi-locality. While the previous chapter dealt with newly generated content, we will now explore the question of what methodological pros and cons emerged when using visual methods during interviews.

Challenges included the time needed for the interviews due to the visual methods, as up to 2 hours had to be planned. In terms of the biographies, there also had to be enough space, preferably at a sufficiently large table, to fill in the timelines.

Nevertheless, handing out the timeline tools and photos at the beginning of the interviews created a suitable introduction as it aroused interviewees’ interest and attention. Even so, with regard to the timeline tools, some interviewees said things like “((laughing)) I’m no good at that sort of thing”, all interviewees filled out the timelines in a more or less detailed manner. Interviewees seemed less constrained or inhibited due to the visual methods. In most cases, they immediately started describing what they saw or wrote down and why. Interviewers did not need to ask that many questions, as interviewees mostly gave detailed answers supported by the visual methods. Memories were jogged by filling the timelines or...
looking at the photos. Furthermore, the material was available after the interviews, helping the interviewers interpret the data.

Interviewees were able to describe events within their biographies chronologically or to jump back and forth between photographs or parts of the biographies to contextualise events. For example, one 27-year-old male explained where he felt at home pointing to several events: “Even though I was born in Saxony-Anhalt and spent the first 3 years of my life there [points to the residential biography], my home is... You can see it here [points to the residential biography] quite nicely: I spent the longest time in Erlangen. It is simply home for me.” Interviewees could also use the photos to complement their narratives with such statements as “as you can see here” or “as is exactly shown in this photo”.

Using the visual methods also made it easier for interviewees to follow the narratives as they were able to point to specific details in biographies or photos and ask more detailed questions, such as “You said you didn’t feel good at that company. Why not?”. With the help of the visual methods, interviewees acted as experts on their own lives, reflecting on their own experiences. Writing down the biographies made them aware of how, for example, past decisions had influenced their present situation. Some mentioned that they had never thought, for example, about the relationship between residential and work biographies. The photos also encouraged them to establish mental links between the various places and stages of their lives.

Visualising specific events and situations in the biographies and photos significantly enhanced discussions of sensitive and private topics. Interviewees seemed to speak more openly, while interviewers were less inhibited about asking personal questions. In some cases, very emotional statements and moments came to light such as tearful interview passages, photographs of babies or children in the pool or nostalgic statements made while inserting past flats or jobs into biographies. When negative emotions became too strong, interviewers were able to shift to other topics.

**Discussion**

While past studies on multi-locality have not used such visual methods, this paper has especially revealed new temporal and spatial insights into multi-local living arrangements. The findings regarding such arrangements as well as the place attachment of multi-locals underlie and expand existing studies in spatial sciences and multi-locality research which found out that multi-locals are attached to multiple places (Duchêne-Lacroix, 2015; Lange, 2018) due to, for example, social contacts, specific infrastructures or property ownership (ARL, 2021; Schier et al., 2015). Beyond that, the use of work-life biographies has revealed the temporal development of multi-local living arrangements and the place attachment of multi-locals as well as the interplay between living and working arrangements over time and the underlying decisions. As names of places of residence and employers were mentioned, the biographies also exposed a spatial dimension. Using reflexive photography especially revealed the spatial dimension of living and working arrangements and place attachment of multi-locals – for example, which means of transport they used to commute or how home ownership or natural environment were determinants of attachment.

Further insights into the meaning-making processes behind past and present living and working arrangements were developed, with a special focus on decisions relating to becoming or remaining multi-local. Both used methods were very suitable to collect and analyse researcher- and respondent-created data (Prosser & Loxely, 2008). In contrast to existing studies not using visual methods, interviewees were also able to visualise their preferred future – for example, where they would like to spend the next years.

As biographies can consist of a mix of mono- and multi-local phases, they underline the temporality as well as fluidity and fragility of multi-local living arrangements (Schier et al., 2015). In contrast to previous studies considering people as multi-locals who have their main residence far away from their workplace, even though they stay in hotels at their place of work (e.g., Othengrafen, et al., 2021; Schier et al., 2015), the findings presented here show that some interviewees do not regard themselves as multi-locals, but as people “living in one place and working in another”.

The biographies and photos show circumstances relating to partner- or family life, underlining existing studies which found that multi-locality does also affect the multi-locals’ families, partners and friends, as they are present and absent for prolonged periods (ARL 2021; Van der Klis & Karsten, 2009).

As regards the methodology, past studies have also shown that visual methods can create a suitable interview introduction, fill in memory gaps and support interviewees’ narratives in the case of both timeline tools (Gleich, 2020; Schubring, et al., 2019) and photography tools (Dirksmeier, 2007b), corroborating our positive experience regarding their use.

Visualisations in the timelines can help interviewees to reflect on their experiences (Bagnoli, 2009; Chen, 2018; Weidinger, et al., 2019). The same is true for photos, with past studies showing that “using photographs as a trigger sharpens the participants’ ability to inform stories of their daily living and to reflect on them” (Cahyanto, et al., 2016, p. 6). Similarly, discussing sensitive topics is enhanced by timeline tools (Schubring, et al., 2019) and photos as they “serve as windows into their emotional worlds.” (Barromi-Perlman, 2016, p. 14).

Timeline-based visual methods are especially suitable for charting events chronologically and contextualizing them (Bremner, 2020; Kieslinger, et al., 2020; Schubring, et al., 2019), while photos show in-depth details of several locations which would not have been visible in an interview in only one location.

The use of these visual methods as well as self-reflection worked well for the specific sample of (high)-qualified multi-
local employees in knowledge-based sectors, whereas previous studies have established that interviewees may have problems filling out timelines due to a lack of familiarity with visual methods or difficulties with temporal imagination or written language (Kolar, et al., 2015).

Concerning timeline-based methods, more open forms are available where interviewees are given a blank sheet of paper (Bagnoli, 2009; Guenette & Marshall, 2009). But the two-dimensional printed timeline coupled with the given biographical topics (work and residential biographies) provide interviewees with more orientation and can help in identifying similarities and differences between biographies (Schubring, et al., 2019). Bremner (2020) discusses whether it is better to fill in timelines at home before the interviews, enabling events to be recorded that may not immediately come to mind during an interview. On the other hand, visualising biographies during interviews can provide a navigational filter, with interviewees identifying which events are subjectively important enough to be added to the timeline (Kolar, et al., 2015).

There are also numerous photographic methods that can be conducted in different ways. For example, photos can be taken during interviews or specific photos made available by the interviewers (e.g., photo-elicitation) to stimulate narratives on specific topics. Photos encourage people to talk about their ideas for the future, without painting specific visions, as may be done using specially designed methods (e.g., a collage representing a vision of the future). Furthermore, it can be assumed that motives, events and situations of use in understanding participants’ living and working arrangements are photographed with a special meaning from an individual perspective (Eberth, 2018).

**Conclusion and Outlook**

Work-related multi-locality, an increasing phenomenon in both urban and rural areas, is very complex in socio-spatial terms and is, therefore, an upcoming topic requiring further research (Di Marino & Lapintie, 2018). This paper has explored the value of using the participatory visual methods *work-life biographies* and *reflexive photography* to study the living and working arrangements of multi-local employees in knowledge-based sectors.

We recommend using these and other participatory visual methods as researcher- and respondent-created data (Prosser & Loxely, 2008) to explore different topics in qualitative studies, as they are valuable for interviewees and researchers alike. Especially for multi-locality studies in combination with spatial development and planning, visual methods can be beneficial in stimulating and addressing spatial as well as temporal thinking and drawing. Visual methods can show things from a different angle, for example highlighting positive or negative situations or triggering creative thinking. As a result, including visual elements in qualitative interviews is very useful but should be used in line with the research questions. It is essential to find out exactly which visual methods suit which sample and which topics, as some methods are specifically useful to study questions concerning the past (e.g., ‘found data’ collection methods such as old photo albums), the present (e.g., reflexive photography) or combinations of past, present and future (e.g., work-life biographies).

While there are no visual methods able to forecast future decisions of multi-locals, it is important for spatial planners in particular to find a method that stimulates spatial thinking in conjunction with future developments. Timeline tools and photos are beneficial for obtaining results at a conceptual level, but for more detailed analyses and to access visions of their futures, the tasks assigned to interviewees need to be adapted to allow the visual methods to portray the future.

Future studies should investigate how Covid-19 has changed the phenomenon of multi-locality quantitatively and qualitatively. Research shows that during the Covid-19 pandemic many employees – including multi-locals – were able to work from home more often, especially in knowledge-based sectors. Similarly, many employers intend to maintain teleworking after the pandemic is over (Bartik, et al., 2020; Bick, et al., 2020). For example, in Finland, demand for second homes has increased, reflecting the growing number of multi-locals able to work far away from their main residence (Willberg, et al., 2021). As multi-locals, in their capacity as family members, parents or partners, are present and absent, their living arrangements affect not just themselves, but also their relatives (Schier, et al., 2015), a shift to teleworking could ease the organisation of everyday life: multi-locals working from home can be more present, not spending too much time on traveling between residences. Some may give up their second residence (Garde, 2021). But it is still unclear whether multi-locality will start to decline, as it remains unclear how teleworking affects e.g., productivity and mental health (Reuschke & Felstead, 2020).

Finally, in this age of digitalization, the question remains as to how visual methods can be used digitally. First studies have emerged using visual methods for remote fieldwork, e.g., using a video ethnography ‘home tour’ and hand-drawn maps of people’s homes (Watson & Lupton, 2022). Further methods suited to (online) interviews need to be checked out.

**Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Funding**

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Friedrich-Ebert-Stiftung.

**ORCID iDs**

Lisa Garde  @ https://orcid.org/0000-0002-7504-6922

Lena Greinke  @ https://orcid.org/0000-0001-8378-9956
References

Amerson, R., & Livingston, W. G. (2014). Reflexive photography: An alternative method for documenting the learning process of cultural competence. *Journal of Transcultural Nursing*, 25(2), 202–210. https://doi.org/10.1177/1043659613515719

ARL - Academy for Territorial Development in the Leibniz Association (Eds.). (2021). *Multilocale living and spatial development*. Positionsspapier aus der ARL 123.

Bagnoli, A. (2009). Beyond the standard interview: The use of graphic elicitation and arts-based methods. *Qualitative Research*, 9(5), 547–570. https://doi.org/10.1177/1468794109343625

Baromi-Perlman, B. E. (2016). Using visual reflective diaries of photographs of school buildings as a tool for empowering students in teacher training. *International Journal of Qualitative Methods*, 15(1), 1–15. https://doi.org/10.1177/1609406916653760

Bartik, A., Cullen, Z., Glaeser, E. L., Luca, M., & Stanton, C. (2020). What jobs are being done at home during the COVID-19 crisis? Evidence from firm-level surveys. Working Paper 27422. National Bureau of Economic Research. https://doi.org/10.2139/ssrn.3634983

Bauder, H. (2015). The international mobility of academics: A labour market perspective. *International Migration*, 53(1), 83–96. https://doi.org/10.1111/1468-2435.2012.00783.x

Beige, S., & Axhausen, K. (2008). Long-term and mid-term mobility decisions during the life course: Experiences with a retrospective survey. *LATISS Research*, 32(2), 16–33. https://doi.org/10.1016/S0386-1112(14)60206-5

Bick, A., Blandin, A., & Mertens, K. (2020). *Work from home after the COVID-19 outbreak*. Federal Reserve Bank of Dallas, Working Papers. https://doi.org/10.24149/wp2017r1

Brake, A. (2009). Photobasierte befragung. In S. Kühl, P. Strodtholz, & A. Taffertshofer (Eds.). *Handbuch Methoden der Organisationsforschung. Quantitative und Qualitative Methoden*. (pp. 369–388). Springer Fachmedien

Brecker, R. (2012). Bildwahrnehmung – bildinterpretation: Segmentanalyse als methodischer Zugang zur Erschließung bildlicher Sinsen. *Österreichische Zeitschrift für Soziologie*, 37(2), 143–164. https://doi.org/10.1007/s11614-012-0026-6

Bremner, N. (2020). Time for timelines: The take-home timeline as a tool for exploring complex life histories. *International Journal of Qualitative Methods*, 19(1), 1-13. https://doi.org/10.1177/1609406920948978.

Cahyanto, I. P., Pennington-Gray, L., & Thapa, B. (2016). A postcard from the village: Using reflexive photography as a means of developing tourism. *Travel and Tourism Research Association: Advancing Tourism Research Globally*, 4, 1-9. https://scholarworks.umass.edu/tra/2009/Presented_Papers/4

Chen, A. T. (2018). Timeline drawing and the online scrapbook: Two visual elicitation techniques for a richer exploration of illness journeys. *International Journal of Qualitative Methods*, 17(1), 160940691775320, https://doi.org/10.1177/1609406917753207

Diehl, K., & Lindenthal, J. (2021). Trajectories of health status during the transition from school to university: Piloting the method of biographical mapping in German medical students. *Children*, 8(8), 622. https://doi.org/10.3390/children8080622

Di Marino, M., & Lapinie, K. (2018). Exploring multi-local working: Challenges and opportunities for contemporary cities. *International Planning Studies*, 25(2), 129–149. https://doi.org/10.1080/13563475.2018.1528865

Dirksmeier, P. (2007a). Der husserlsche Bildbegriff als theoretische Grundlage der reflexiven Fotografie: Ein Beitrag zur visuellen Methodologie in der Humangeografie. *Social Geography*, 2(1), 1-10. https://doi.org/10.5194/sg-2-1-2007, www.soc-geoegr.net/2/1/2007/

Dirksmeier, P. (2007b). Mit Bourdieu gegen Bourdieu empirisch denken: Habitusanalyse mittels reflexiver Fotografie. *ACME: An International E-Journal for Critical Geographies*, 6(1), 73–97. https://acme-journal.org/index.php/acme/article/view/766/626

Dirksmeier, P. (2009). *Urbanität als Habitus. Zur Sozialgeographie städtischen Lebens auf dem Land. transcript Verlag.*

Dirksmeier, P. (2013). Zur Methodologie und Performativität qualitativer visueller Methoden: Die Beispiele der Autofotografie und reflexiven Fotografie. In E. Rothfuß, & T. Dörfler, (Eds.). *Raumbezogene qualitative sozialforschung* (pp. 83–101). Springer Fachmedien.

Dittrich-Wesbuer, A., & Kramer, C. (2014). Heute hier – morgen dort: Residenzielle multilokalität in deutschland. *Geographische Rundschau*, 66(11), 46–52.

Dittrich-Wesbuer, A., Kramer, C., Duchêne-Lacroix, C., & Rumpoldt, P. A. (2015). Multi-local living arrangements: Approaches to quantification in German language official statistics and surveys. *Tijdschrift voor Economische en Sociale Geografie*, 106(4), 409–424. https://doi.org/10.1111/tsg.12160

Duchêne-Lacroix, C. (2015). Archipel oder die Territorialität in der Multilokalität der Lebenswelt. In P. Weichhart, & P. A. Rumpolt (Eds.). *Mobil und doppelt sesshaft. Studien zur residenziellen Multilokalität* (pp. 218–239). Abhandlungen zur Geographie und Regionalforschung Bd. 18.

Eberth, A. (2018). Raumwahrnehmungen reflektieren und visualisieren: Erforschung sozialer Räume mittels reflexiver Fotografie. In J. Wintzer (Ed.), *Sozialraum erforschen: Qualitative methoden in der Geographie*, (pp. 279–295). Springer Spektrum

Garde, L. (2021). Multi-local living arrangements: An International E-Journal for Critical Geographies, 73, 97–117. https://acme-journal.org/index.php/acme/article/view/766/626

Glasner, T., & Van der Vaart, T. (2009). Applications of calendar instruments in social surveys: A review. *Quality & Quantity*, 43(3), 333–349. https://doi.org/10.1007/s11355-007-9129-8

Glaw, X., Inder, K., Kable, A., & Hazelton, M. (2017). Visual methodologies in qualitative research: Autophotography and photo elicitation applied to mental health research. *International Journal of Qualitative Methods*, 16(1), 1–8. https://doi.org/10.1177/1609406917748215

Gleich, S. (2020). Berufsinduziertes Leben an mehreren Orten. *Herausforderung von raum-zeitlicher Souveränität unter Bedingungen des...*
multilokalen Lebens. Karlsruher Institut für Technologie. https://doi.org/10.5445/IR/1000127131

Greinke, L. (2020). Berufsbedingte Multilokalität in ländlichen Räumen Niedersachsens. Gesellschaftliche und räumliche Auswirkungen als planerische Herausforderung am Beispiel des Landkreises Diepholz. Ländliche Räume: Beiträge zur lokalen und regionalen Entwicklung, (vol. 7). LIT-Verlag.

Guenette, F., & Marshall, A. (2009). Time line drawings: Enhancing participant voice in narrative interviews on sensitive topics. International Journal of Qualitative Methods, 8(1), 85–92. https://doi.org/10.1177/16094069090800108

Harper, D. (2000). Reimagining visual methods: Galileo to neuroscience. In N. K. Denzin, & Y. S. Lincoln (Eds.), The handbook of qualitative research (pp. 717–732). Sage Publications.

Helfferich, C. (2011).

Hilti, N. (2009). Here, there and in-between: On the interplay and multilocally living, space and inequality. In T. Ohnmacht, H. Maksim, & M. M. Bergman (Eds.), Mobilities and inequalities (pp. 145–163), Ashgate publishing.

IHK – Industrie- und Handelskammer Region Stuttgart (2019). IHK-Fachkräftemonitoring bis 2030. Steigender Fachkräftemangel kostet Milliarden.

Jackson, P., & Russel, P. (2010). Life history interviewing. In D. DeLyser, S. Herbert, S. Atiken, M. Crang, & L. McDowell (Eds.), The SAGE handbook of qualitative geography (pp.172–192). SAGE Publications.

Johnsen, S., May, J., & Cloke, P. (2008). Imag(in)ing ‘homeless places’: Using auto-photography to (re)examine the geographies of homelessness. Area, 40(2), 194–207. https://doi.org/10.1111/j.1475-4762.2008.00801.x

Kieslinger, J., Kordel, S., & Weidinger, T. (2020). Capturing meanings of place, time and social interaction when analyzing human (Im)mobilities: Strengths and challenges of the application of (Im)mobility biography. Forum Qualitative Sozialforschung/Forum: Qualitative Social Research, 21(2). https://doi.org/10.17169/fqs-21.2.3347

Kilkey, M., & Palegno-Müllenbeck, E. (2016). Family life in an age of migration and mobility: Global perspectives through the life course. Palgrave Macmillan.

Kolar, K., Ahmad, F., Chan, L., & Erickson, P. G. (2015). Timeline mapping in qualitative interviews: A study of resilience with marginalized groups. International Journal of Qualitative Methods, 14(3), 13–32. https://doi.org/10.1177/160940691501400302

Kowald, M., & Axhausen, K. W. (2016). Social networks and travel behaviour. Routledge.

Kramer, C. (2012). Alles hat seine Zeit – die “Time geography” im Licht des Material Turn”. N. Weixlbaumer (Ed.), Anthologie zur Sozialgeographie (pp, 83–105). Wien. Abhandlungen zur Geographie und Regionalforschung 16.

Krisch, R. (2002). 6. Methoden einer sozialräumlichen Lebensweltanalyse. In U. Deinet, & R. Krisch (Eds.), Der sozialräumliche Blick der Jugendarbeit. Methoden und Bausteine zur Konzeptentwicklung und Qualifizierung. (pp. 87–154). Verlag Leske + Budrich.

Landkreis Diepholz (2018, December 20). Landkreis Diepholz. Gut miteinander leben. https://www.diepholz.de/

Lange, L. (2018). Leben an mehreren Orten. Multilokalität und bürgerschaftliches Engagement in ländlich geprägten Räumen Niedersachsens. LIT Verlag.

Latham, A. (2004). Researching and writing everyday accounts of the city: An introduction to the diary-photo diary-interview method. In C. Knowles, & P. Sweetnam (Eds.), Picturing the social landscape: Visual methods and the sociological imagination (pp. 117–131). Routledge.

Löw, M. (2001). Raumsoziologie. Suhrkamp.

Mayring, P. (2010). Qualitative Inhaltsanalyse, (pp. 11). Beltz.

Meo, A. I. (2010). Picturing students’ habitus: The advantages and limitations of photo-elicitation interviewing in a qualitative study in the city of buenos aires. International Journal of Qualitative Methods, 9(2), 149–171. https://doi.org/10.1177/160940691000900203

Merla, L., & Nobels, B. (2019). Children negotiating their place through space in multi-local, joint physical custody arrangements. In L. Murray, L. McDonnell, T. Hinton-Smith, N. Ferreira, & K. Walsh (Eds.), Families in motion: Ebhing and flowing through space and time (pp. 79–95). Emerald Publishing Limited.

Nadler, R. (2014). Plug&Play places. Lifeworlds of multilocal creative knowledge workers. De Gruyter Open Ltd.

Oldrup, H., & Carstensen, T. A. (2012). Producing geographical knowledge through visual methods. Geografiska Annaler Series B Human Geography, 94(3), 223–237. https://doi.org/10.1111/j.1468-0067.2012.00411.x

Othengrafen, F., Lange, L., & Greinke, L. (2021). Temporäre An- und Abwesenheiten in ländlichen Räumen. Auswirkungen multilokaler Lebensweisen auf Land und Gesellschaft. Springer VS.

Plöger, J. (2020). Employers stuck in place? Knowledge sector recruitment between regional embeddedness and internationalization. Regional Studies, 54(12), 1737–1747. https://doi.org/10.1080/00343404.2020.1765231

Prosser, J., & Loxely, A. (2008). Introducing visual methods. ESRC National Centre for Research Methods Review Paper, NCRM/010

Reuschke, D., & Felstead, A. (2020). Changing workplace geographies in the COVID-19 crisis. Dialogues in Human Geography, 10(2), 208–212. https://doi.org/10.1177/2043820620934249

Rosenthal, G. (1993). Reconstruction of life stories: Principles of selection in generating stories for narrative biographical interviews. The Narrative Study of Lives 1(1), 59–91.

Schier, M., Hilti, N., Schad, H., Tippel, C., Dittrich-Wesbuer, A., & Monz, A. (2015a). Residential multi-locality studies. The added value for research on families and second homes. Regional Studies, 49(12), 1737–1747. https://doi.org/10.1080/00343404.2020.1765231

Schier, M., Schlinzig, T., & Montanari, G. (2015b). The logic of multi-local living, space and inequality. In T. Ohnmacht, H. Maksim, & M. M. Bergman (Eds.), Mobilities and inequalities (pp. 145–163), Ashgate publishing.

Walsh (Eds.). Introducing visual methods: Galileo to neuroscience. In N. K. Denzin, & Y. S. Lincoln (Eds.), The handbook of qualitative research (pp. 717–732). Sage Publications.
Schoenduwe, R., Mueller, M. G., Peters, A., & Lanzendorf, M. (2015). Analysing mobility biographies with the life course calendar: A retrospective survey methodology for longitudinal data collection. *Journal of Transport Geography, 42*(1), 98-109. https://doi.org/10.1016/j.jtrangeo.2014.12.001.

Schubring, A., Mayer, J., & Thiel, A. (2019). Drawing careers: The value of a biographical mapping method in qualitative health research. *International Journal of Qualitative Methods, 18*(1), 1-12. https://doi.org/10.1177/1609406918809303.

Schulze, S. (2007). The usefulness of reflexive photography for qualitative research: A case study in higher education. *SAJHE, 21*(5), 536–553. https://doi.org/10.4314/sajhe.v21i5.50292

Schütze, F. (2008). Biography analysis on the empirical base of autobiographical narratives: How to analyse autobiographical narrative interviews, Part I. *European Studies on Inequalities and Social Cohesion, 1-2/2008*, 153–242.

Siegmund, Y. (2020). *Was treibt die Planung? Eine zeitbezogene Untersuchung von Abhängigkeiten in Quartiersentwicklungen*. HCU Hamburg. https://doi.org/10.34712/142.7.

Tippel, C., Plöger, J., & Becker, A. (2017). ‘I don’t care about the city’. The role of connections in job-related mobility decisions of skilled professionals. *Regional Studies, Regional Science 4*(1), 94–108. https://doi.org/10.1016/j.rsssec.2017.1315611

Van der Klis, M., & Karsten, L. (2009). The commuter family as a geographical adaptive strategy for the work-family balance. *Community, Work & Family, 12*(3), 339–354. https://doi.org/10.1080/13668800902966372

Vergara, C. J. (2014). *Tracking time. Documenting America’s post industrial cities*. Kerber Verlag.

Watson, A., & Lupton, D. (2022). Remote fieldwork in homes during the Covid-19 pandemic: Video-call ethnography and map drawing methods. *International Journal of Qualitative Methods, 21*(1), 160940692210783, online first. https://doi.org/10.1177/16094069221078376

Weichert, P. (2009). Multilokalität - konzepte, Theoriebezüge und Forschungsfragen. *Informationen zur Raumentwicklung, 1/2*, 1-14.

Weidinger, T., Kordel, S., & Kieslinger, J. (2019). Unravelling the meaning of place and spatial mobility: Analysing the everyday life worlds of refugees in host societies by means of mobility mapping. *Journal of Refugee Studies, 34*(1), 374–396. https://doi.org/10.1093/jrs/fez004

Willberg, E., Järv, O., Vässänen, T, & Toivonen, T. (2021). Escaping from cities during the COVID-19 crisis: Using mobile phone data to trace mobility in Finland. *ISPRS International Journal of Geo-Information, 10*(2), 103. https://doi.org/10.3390/ijgi10020103

Witzel, A. (2000). Das problemzentrierte interview. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research, 1*(1). https://www.qualitative-research.net/index.php/fqs/article/view/1132/2519

Wood, G., Hilti, N., Kramer, C., & Schier, M. (2015). Multi-locality studies - a residential perspective. *Tijdschrift voor Economische en Sociale Geografie, 106*(4), 363–377. https://doi.org/10.1111/tesg.12158