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Highlights:

- Photovoice was used to narrate the processes and outcomes of urban redevelopment
- The method revealed power relations and patterns of controls in the processes
- Heritage awareness was promoted by engagement in place making practices
- Visual narratives of spatial transformation, sense of place, and attachment were elicited
- Ethical, epistemic, and methodological limitations and challenges are discussed

Visualising urban redevelopment: Photovoice as a narrative research method for investigating redevelopment processes and outcomes

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Abstract

The use of participatory visual methods has gained significant momentum in visual, urban, planning, and geography research. This article provides methodological understanding of how the photovoice method can contribute to urban redevelopment studies, particularly for producing and narrating interpretive data on the processes and outcomes of urban redevelopment.

Photovoice as participant-generated photographs was used to explain and explore the individual experience of involvement in redevelopment projects within selected urban areas in Tehran.

Resident research participants captured photographs representing the area and the places within them, and were then individually interviewed in-depth about the significance of the photographs and their own experiences. Other stakeholders, including developers and local authorities, were also interviewed. A total of 36 interviews and 65 photovoice contributions were thematically analysed.

Within the urban redevelopment context, photovoice is a multi-faceted resource that can verify the processes and outcomes of urban change. Using this method enabled the scrutiny of the tangible and intangible meanings that the research participants attached to their entities—objects, places, communities, and practices—revealing a certain set of power relations and patterns of controls in urban redevelopment processes. The findings demonstrate the utility and application of photovoice in understandings of place making and heritage value, as well as those of visual narratives of spatial transformation, and residents' perceptions and attachment. The study also discusses the particular epistemic and methodological limitations of photovoice within the urban redevelopment context, including the research process, its potential, and associated challenges.

Key words: Participatory visual method; Photovoice; Photography; Urban redevelopment; Place making; Heritage awareness

1. Introduction: Photography as a research tool

Photography is much more than simply pressing a button on a mobile phone or camera, and photographs of the same object or place vary because of each photographer's way of viewing, understanding, and representing the world. Each photograph is formed more by the person behind the camera than by what is in front of it. As the noted American landscape photographer, Ansel Adams (1902–1984) believed, 'we do not take a photograph, we make a photograph' as a model of our thinking about the world. Indeed, our photographs are representative of our vision of the world and the way we think our life should be represented—highlighting how 'subjectivity' is the key driver in the way we create a photograph (Warren, 2005; Lykes, 2010). Since individuals possess a unique subjectivity, what they create is 'a unique way to communicate dimensions of their lives' (Clark-Ibáñez, 2004, p.1,507). However, this does not mean we do not share similar elements within, and the meanings attached to, the photographs that we produce.

Studying the shared or distinctive elements such as buildings, angles, meanings, senses, and beliefs within individual photographs reveals a collective approach. How a group of people observe and interpret their surroundings and actions echoes their willingness and aspiration to change, or the resistance not to change, within their environment. The acquisition and articulation of such data is very useful for many disciplines, including visual, urban, planning, and geography studies, to understand communities and how they perceive their places and interpret place-making processes (*see* Beilin, 2005; Van Auken et al., 2010; Bisung & Elliott, 2019; Lak & Kheibari, 2020). Although this is not the only way to capture a community's senses and beliefs, it is a useful means of stimulating the subjective multiple meanings, memories, and biographies attached to photographs (Harper, 2004; Pink, 2011; Stedman et al., 2014; Madgin et al., 2016). However, this subjective, qualitative, and interpretive tool is not straightforward, and requires a range of precise steps from data preparation to data collection and analysis.

One key methodological debate on using participatory visual methods is about addressing or 'challenging the unequal power relations between researcher and researched' (Johnsen et al., 2008, p.195). Literature often argues that moving away from 'prefect images' produced (and composed) by researcher towards the use of amateur (digital) auto-photography can empower

‘powerless participants’ to record and exchange the meanings attached to their self-generated photographs (Pink, 2011; Rose, 2012; Bennett and Dearden, 2013). Indeed, photographs as tangible resources are used to narrate meanings, and the significance of these meanings in everyday life, which are very much indicative of the participants’ socio-cultural and personal status.

In the urban context, photographs are frequently used to document and study the interactions between place and everyday life (Gehl & Svare, 2013). Photography enables researchers to (re-)examine how one particular group of citizens use and react differently to urban changes or other dynamics occurring in urban spaces. For example, photographs can be used as evidence to illuminate the geographies of homeless people’s day-to-day lives in English cities (Johnsen et al., 2008) or explore the experience of urban place(s) by working-class women living in Belfast (McIntyre, 2003). The use of photography as a method of data collection can lead to the illumination of ‘hidden spaces’ and/or ‘uncomfortable spaces’ for different social groups due to their different use of space, historical experiences, unexpected encounters, and/or inappropriate interactions. For this reason, the provision of a visual quality to aid understanding of the landscapes of change and conflict makes photographs a valuable asset for researchers and others interested in examining urban landscape change (Kruse, 2012) or social change (Liebenberg, 2018).

A review of the literature suggests that photo-based research methods, such as photovoice, are a useful participatory approach for studying the interactions between people and their environment (Wang, 2003; McIntyre, 2003; Stedman et al., 2014; Ronzi et al., 2019). Researchers have highlighted the importance of photography as evidence and its application for studying the socio-cultural dynamics of space, place, and landscape (Heng, 2018; Johnsen et al., 2008), family and historical archives (Twine, 2006; Chassanoff, 2018), or the personal and collective aspects of ‘biographies and narratives’ (Pink, 2011). However, gaining a systematic understanding of how photovoice can contribute to urban redevelopment studies remains a research challenge, suggesting the need for a profound understanding and examination of the use and application of photovoice methods in urban redevelopment contexts.

The primary aim of this study is to provide a methodological understanding of how the photovoice method can contribute to urban redevelopment studies, particularly for producing and narrating interpretive data on the processes and outcomes of urban redevelopment. In achieving this aim, the research questions, therefore, are: *How can photovoice be used as a methodological research approach to identify and understand urban redevelopment processes and outcomes? How can this be achieved, and what are the possibilities, challenges, and limitations?* The article addresses these epistemic and methodological questions by employing empirical data from the developing world. It discusses how individuals involved in urban redevelopment projects in Tehran (Iran) represent the subjective meanings they attach to their developing places through self-generated photographs. The article demonstrates the utility and applicability of photovoice as a participatory visual research method for producing interpretive data on the processes and outcomes of urban redevelopment. The utility of the method was assessed by the feasibility and suitability of photovoice in representing and narrating the complex processes/outcomes of redevelopment and urban change. In this study, the concept of ‘urban redevelopment’ is used to denote the formal reorganisation processes which are both transforming the physical-spatial aspects of existing urban areas and facilitating local socio-economic regeneration. Redevelopment processes follow urban planning, design, rehabilitation, restoration, and reconstruction, or a combination of these stages involving local authorities, developers, and residents.

2. Photovoice as participant-generated photographs

The integration of photography and individual narratives allows researchers to become more empirically precise about the identification and meanings of the places that people value, which are not necessarily large buildings or areas of high visual value. To understand how a photograph represents a place with/without high visual value, we must know who created the photograph, how and when it was created, and by whom it was interpreted. These factors illustrate the epistemic and ethical dimensions of integrating ‘photography and collaborative discussion of meaning’ (Liebenberg, 2018, p.7), discussed further in this section and in the research method section.

Several researchers have discussed the fact that people are interested in places with robust socio-cultural links (Stedman et al., 2004; Kopra, 2006). As people can simply represent a landscape through photographs, environmental psychologists and landscape planners/managers employ a visual representation to link the concept of ‘the voice to place and voice and place to landscape’ (Beilin, 2005, p.57). Although some attributes of a landscape such as sound, smell, or sensation at the time of photography cannot be discerned, these aspects can be explored via ‘photovoice’ as participant-generated photographs, by giving agency/voice to participants (Bisung & Elliott 2019). Photovoice is a form of participatory research method which enables research participants to discover and share their concerns, challenges, and aspirations about their community by photographing scenes of their everyday life (*see* Wang & Burris, 1997; Wang, 2003; Fairey, 2018). While (auto-)photography is not the only tool to encourage a community to contribute voluntarily in research and qualitatively express their ideas about intangible notions, it is a practical, fun activity for both the contributors to research and the researchers (McIntyre, 2003; Johnsen, et al., 2008). It is especially useful for engaging with citizens who might be reluctant to participate in technically-based consultation procedures due to the use of GIS or other technical terms (*see* McCall & Dunn, 2012; Nyantakyi-Frimpong, 2019).

Multiple visual research techniques utilise photovoice to study the interrelation of different features of a community’s experiences by allowing participants to express themselves in various ways (Dennis et al., 2009). These techniques range according to the level of interference required by the researcher. A low level of interference involves participants capturing/collecting the photographs (*see* Beckley et al., 2007), while a high level involves the researcher taking or selecting the photographs (*see* Madgin et al., 2016), although combinations of both participant- and researcher-generated photographs can be used. Expressing community members’ complex and multi-layered relationships with a place also requires appropriate investigation and analysis. For example, one community member may perceive and interpret the neighbourhood as a personal source of employment and income, while another may highlight common values and meanings associated with the historic urban landscape of the place. To reveal such complexity, this study integrated participant-generated photographs with in-depth individual interviews to explore and interpret a spatial setting (photographs) for its socio-cultural and environmental attributes.

As an operative technique, photovoice has been used to investigate individual/community values for a place in fields such as planning and landscape (Stewart et al., 2004; Maclean & Inc, 2015), urban geography (McIntyre, 2003; Mitchell et al., 2007), sociology and anthropology (Harper, 2002; Heng, 2018), community health (Dennis et al., 2009; Ronzi et al., 2019), and natural resources management (Kopra, 2006). Participants are asked to collect or capture several photographs representative of their place and the values within them. After the collection, they are invited to an in-depth interview to discuss their photographs. This method elicits from (place-based) community members in-depth data on why these spaces/objects/persons are significant for them (Stewart et al., 2004; Steen Jacobsen, 2007) or ‘why certain social phenomena within specific communities exist’ (Liebenberg. 2018, p.7).

In the eyes of the people involved in photovoice, this method is more enjoyable and effective than the conventional methods of interviews alone or focus groups when applied in the investigation of the interactions between people and their setting (Wang and Burris, 1997; Beckley et al., 2007). While an interviewee interprets the photographs, the researcher’s skills in listening and acknowledging the participant-generated photographs allow the interviewee to feel respected in a non-evaluative and relaxed situation (Dennis et al., 2009). Such in-depth interviews using the photographs also clarify the subjective (interpretive) meaning of their experiences through photographs to construct what really matters to them. The common places of value in the photographs narrate the sense of community, and the reasons given for their importance can be investigated during the interviews, adding ‘reliability’ and ‘validity’ to conventional research interviews (Harper, 2002).

Simply inquiring of an interviewee how they experience the places they live and work in, and their redevelopment, may not reveal the complexity of the emotional, functional, and identifiable meanings they assign to the place. For this reason, several researchers have adopted visual methods, such as ‘resident-employed photography’ (Stedman et al., 2004; Beckley et al., 2007), or ask visitors to capture photographs (Tonge et al., 2013), to describe what constitutes the interrelationships between people and place. In the resident-employed photography (REP) method, participant residents are encouraged to express their meanings and attachment to the

place through the photography. In contrast to visitor-employed photography, residents have a different degree of familiarity with the place compared to visitors and so their perceptions are different. The values attached to a place have different meanings for each group. Since this study considers urban redevelopment in specific local contexts as a place-based strategy, it investigates the perceptions of the residents, not visitors; therefore, this study utilises REP.

The epistemic and ethical aspects of implementing photovoice have sparked considerable ongoing debate among qualitative researchers. Many participatory visual methods have the capacity to ‘give voice’ to marginalised, unheard, or silent individuals and communities through photographs, videos, and narratives (Luttrell & Chalfen, 2010; Couldry, 2010; Fairey, 2018). Such participatory initiatives, facilitated by the researcher, empower the participants to produce ‘photovoice’ to self-report their cultural, socio-political, and environmental concerns and prioritisations (*see* Wang & Burris, 1997; Beckley et al., 2007; Maclean & Inc, 2015; Liebenberg, 2018; Bisung & Elliott, 2019). Nevertheless, empowerment and giving voice is insufficient to produce (and reuse) meaningful, ethical expressions in the research process, since it must also be determined who is speaking (or not), who is listening, how the listening is happening, and under which conditions (Fairey, 2018). These are questions concerning the researcher’s positionality and ethical dilemmas, as factors influencing the research process and knowledge production. Potential ethical dilemmas, such as the visual ethics of photographing others or negotiating power relations and sensitive issues, and how they might need to be addressed (*see* Cox et al., 2014), specifically in the field, can be anticipated in order to ease the research process, and understand the positioning of the researcher and research participants.

3. Study areas and methods

3.1. Study areas: Residential and commercial areas in Tehran

Tehran is a metropolitan city accommodating more than eight million inhabitants from different socio-economic and cultural backgrounds. The city has grown from a small village to one of the world’s largest cities during the last two centuries. A major shift in the urban development and expansion of the city started after the Second World War, when the agricultural land and gardens surrounding the city were mainly transformed into urban infrastructures, and residential and

commercial areas. In recent decades, the pressures of limited land, population increase, and construction profits have been the key drivers for converting low-density urban areas or historic buildings to taller structures, substantially transforming the urban landscape.

Two case study areas were selected in the city of Tehran, where local residents and local businesses have experienced involvement in the redevelopment of their area. The selection of these cases was based on engagement with the local authorities, and the two cases represent a range of experiments from residential to commercial (*see Figure 1*). The local authorities represented by the city municipality established local offices in both cases to engage with local communities and inform them regarding their services and support for involvement in urban redevelopment programmes. The establishment of these local offices was planned and conducted after the identification of urban areas that require redevelopment. Within the programmes, housing and commercial developers were employed to redevelop urban areas.



Figure 1. Study areas: the neighbourhood and market lane (bazaar), photographed by newcomer residents, except the middle produced by the author.

Before the recent redevelopment in the low-income neighbourhood, the residents used to live in tiny houses with living space ranging between 20–100 m². To tackle this major barrier for redevelopment, the local authorities invited the resident owners to assemble their contiguous smaller pieces of land to create larger development sites in which blocks of flats would be built. Owner participants benefited by gaining a new larger flat (private space), to which accessibility was much improved by widening the roads (public spaces). The redevelopment process was planned to aid community empowerment and benefit socially vulnerable groups in poor

economic conditions. The bazaar, which had not been refurbished for more than four decades, is a traditional roofed market lane, located in the historic district of the city. The urban redevelopment planners for the bazaar invited shop owners to reduce the redevelopment costs by making a financial contribution. Raising the added value of their shops and improving the spatial quality and accessibility of the public market lane were the benefits that the shop owners experienced. At the time of the data collection, the redevelopment of the bazaar had almost been completed, but the neighbourhood required a longer period due to its larger scale.

3.2. Research method

Photovoice was employed as part of a wider empirical study completed in 2018, investigating participatory urban redevelopments in Tehran (Erfani, 2018). The researcher recruited volunteers for the photovoice project by approaching the local offices in the residential and commercial areas in Tehran. These offices acted as gatekeepers to introductions to locals who might potentially be interested in contributing to the project. Those who agreed to contribute were informed about their involvement in the photovoice project and the need to take photographs. Each potential participant was given a flyer explaining how to capture or collect six to eight photographs representative of the neighbourhood or bazaar and the places within them. They were free either to collect a picture of a place or activities at different times or capture the photographs themselves. All participants in the photovoice project captured the photographs using their mobile phones and cameras.

Six locals from the residential area agreed to participate in the photovoice project in the bazaar, but only four shopkeepers met the two-week deadline to capture photographs and attend an interview. Among those who contributed, two seemed trustworthy as a representative in the eyes of the shopkeeper community, and were introduced to the researcher by the local authorities. In the neighbourhood, no community activists were introduced by the local office, and the researcher was unable to identify any such leaders by speaking with the locals. This limitation was addressed by recruiting more research participants from the residential area.

After the photo collection, the ten locals who had captured photographs (six residents in the neighbourhood and four shopkeepers in the bazaar) were separately invited for the in-depth

photo-elicitation interviews. The researcher discussed with them what was significant in the taking of each photograph, and their interpretive comments on the photographs, such as by asking what the photographs meant to them. In this way, the researcher sought to understand how the participants perceived the meanings of the urban redevelopment, and the changes in those meanings as redevelopment occurs. Open-ended questions were used for the interviews, such as ‘would you please describe this photo or why did you take/collect this photo’. This type of question benefited the researcher to lead on to in-depth and detailed depictions. Additionally, the interviewees were closely interviewed about their role and experience of involvement in the redevelopment projects to determine why and how they were involved in the redevelopment process. Since the ‘why’ and ‘how’ questions investigate an ‘in-depth [...] process’ (Creswell, 2009, p.13), they allow the researcher to probe the lost chains regarding the relationship between actors, actions and meanings, to understand the process and outcome of urban redevelopment. Demographic information was also collected about each interviewee, including the length of residence or business operation, home address, ownership, job (particularly workplace), gender, and age.

There were some epistemic and methodological challenges in implementing the photovoice project. It was somewhat challenging for the research participants to understand what they needed to take photographs of. To address this issue, all the participants were orally briefed about the aim of the research and were inspired to be creative in what they photographed. To reduce any potential bias affecting the participants’ decision making, they were only given one example of how a photograph of a butterfly can represent transformation and change. The researcher was cautious not to lead the participants’ attention on what to capture. This briefing was given in addition to the flyer that explained all the required details, including: what the participants needed to do, the limited number of photographs, the deadline, the interview duration, their rights as participants, the confidentiality of the information, participant anonymity, and the voluntary nature of the participation.

The interviews were also a challenge in various ways due to the particularity of the research topic. One challenge was that the responses could have been affected if the interviewees linked the interview questions to official decisions taken by local authorities. Even though the purpose

of the interview had already been explained, some interviewees in the commercial case might have preferred not to mention a high level of satisfaction about redevelopment outcomes, since they might have thought that it would influence future decisions by the authorities. There was also the challenge of scheduling time for the data collection in the commercial case, as some applicants did not meet the two-week deadline. In general, the locals in the residential case were more motivated to participate in the research compared to the commercial case. The nature of such challenges relates to the questions of existing power relations and participant interests, as elaborated further in the discussion section.

Visual choices in positioning the angle, framing, place or time of photographs were triangulated with in-depth individual interviews and direct observation of physical spaces to flesh out the outcomes of urban redevelopment experiences. Exploring the specific content/characteristics of the photographs separately and before interviewing the research participants helped the researcher to understand, clarify, and contextualise the narratives elicited during the interviews, as well as any potential bias. The rationale for collecting observational data was recorded in field notes, such as how urban spaces are used by the locals, to provide information that is contextually rich and forms the grounding on which to develop explanatory insights concerning the redevelopment projects in Tehran, which are relatively underexplored. Observing people within their spaces before the interviews strengthened the research by providing more in-depth analysis and interpretation.

3.2.1. Analysis of the materials generated at the photovoice project

After the completion of the interviews, a database of the photographs and transcriptions was generated. According to the meanings and narratives attached to the 65 photovoice contributions which emerged as a result of participation in the research process and interaction between the researcher and participants on the research topic, the data were divided into two main analytical themes: photovoice data indicating the substantive outcomes of urban redevelopments, such as physical-spatial transformations of private and public spaces; and, photovoice data focusing on the redevelopment processes, including engagement and trust building, history and heritage. To reduce the potential for researcher bias, the emerging themes from photovoice participants were reviewed and discussed with two additional experienced academic researchers. Some photovoice

contributions became multi-dimensional and intricate by narrating both the processes and outcomes of urban redevelopment, representing the richness and complexity of the produced data. For instance, one participant attached the functional meaning of their workplace to the background of a certain photograph, while, in the foreground, the photograph meant community trust in the process. To tackle the uncertainty of choosing only one category, some narratives were interpreted as a multiple viewing of visual narratives.

Both photographs and transcriptions were used in the data analysis, since the photographs alone might not have provided full information about the meanings and the relationship with the urban redevelopment. This allowed the researcher to link subjective (interpretivistic) meanings and personal memories to the photographs. For instance, the participants narrated stories, previous conditions, childhood feelings, and many other meanings about their place. To triangulate the results from the photovoice project, common photovoice contributions in both cases were selected, and new questions were developed for discussion in the individual interviews with the other key beneficiaries, including local authorities and developers. These new interviewees were not asked to provide any photographs, and were individually interviewed about their expert and professional opinions of the outcomes of urban redevelopments when they were encountered the preliminary results of the photovoice project. Developing this multi-stage approach contributes to integrating data from multiple stakeholders with different interests and standpoints, contextualising and enriching the understanding of urban redevelopment practices in Tehran.

4. Results

Two main themes emerged: the photovoice contributions representing the procedural outcomes of urban redevelopment; and, the photovoice contributions that address the physical and spatial outcomes. The outcomes generated through the individual experiences of involvement in the redevelopment processes are the procedural outcomes, which mainly address the intangible assets of the processes and include heritage awareness, engagement, and power relations. The physical and spatial outcomes cover tangible assets, such as functional and spatial changes in the environment and residents' perceptions. Research participants, however, may have used tangible stories, for instance, their daily encounter with a developer or stories assigned to an object to narrate intangible meanings. In the discussion section, these results in relation to the literature

review are discussed to examine the usefulness, potential, and challenge of the photovoice method in studying urban redevelopment projects.

4.1. Photovoice of the procedural outcomes of urban redevelopment

4.1.1 Heritage awareness

Research participants in the historic bazaar used photographs as evidence to narrate their individual experiences and interactions in the process of place making. A key reported procedural outcome was the environmental and heritage awareness among the shopkeeper community. For example, an individual shopkeeper captured a photograph of an old scale (Figure 2) to represent the cultural and heritage values attached to their shop and its objects. The photograph is indeed used as narrative evidence of some sensitivity to environmental heritage. The following was a statement made by a young grocer who had taken over the business in the middle of the bazaar from his father:

Everyday several people came here [grocery shop]; they took a picture of the bazaar route and discussed here, and even a number of students took a picture of my scale [Figure 2] ... I was supposed to swap my old scale for a new digital one, but later I thought there might be something in it! So, I asked my father and then I decided to keep it ... [after that] I started to find some more attention-grabbing things in my [old] shop. (35-year-old male interviewee, long-term shopkeeper)



Figure 2. An ‘old scale’ in a grocery shop, photographed by a 35-year-old, long-term shopkeeper

Before the redevelopment process, the grocer could have recognised only the functional and financial values of the objects and property, and so cultural heritage was not valued. Indeed, he used to evaluate everything simply from the angle of efficiency and business. If there was no benefit, it was not valuable. This evaluation is more typical in financial contexts and markets than residential settings, but through involvement in the process of redevelopment, he was, to some extent, able to change this approach. After/during the process, the shopkeeper community became more aware of the socio-cultural values of heritage. This outcome was supported further by the local authorities.

From the local authority viewpoint, the commercial market was a ‘valuable diamond which had been covered in dust’ over the last decades. One outcome of the process was heritage awareness, which revealed the socio-cultural values of the bazaar in the local community’s eyes. As a consultant coordinator and heritage expert explained, ‘my interpretation is that here was like a

gemstone covered in dust. We suddenly took it out and now we are polishing it... it used to be full of drug users and decaying dust' (54-year-old female interviewee). She believed that the socio-cultural activities during the process had removed the stigmatised groups, and the physical redevelopment had stopped the fabric decay, but both were influential in the improvement of heritage awareness. This was also confirmed by a metal shop owner in the bottom end of the bazaar: 'Three/four years ago, I didn't see anything here... But now I think there is a treasure here that can be used...here is the old Tehran' (58-year-old male interviewee). These statements revealed that the bazaar had been changed into a uniquely identifiable place through its heritage, from the eyes of the insiders.

4.1.2. Engagement and power relations

As the study progressed, a reflection on the experience of engagement and power relations between locals and authorities emerged as another procedural outcome. The narratives of research participants in the residential neighbourhood indicated that regular engagement with the local office and its members was a major form of knowledge exchange and the development of new skills. To some, attending the awareness classes run by the local office about urban redevelopment was a significant source of engaging and motivating learning. For instance, a female resident who had lived in the neighbourhood all her life mentioned how before she had '...never thought about the barriers [to redevelopment] in relation to the planning [permission] or the difficulties that a developer has' (37-year-old female interviewee). A retired female resident, whose own old house had been redeveloped into a new, larger flat, highlighted how the engagement with a staff member of the local office had changed her attitude. She commented:

Madam X [a staff member] told me that we have research in which we need someone to take pictures of the neighbourhood. I never thought about this stuff, but today I like to do this kind of task. Also, I know what a 'decaying area' is and so on; so, I learned some stuff, because before [the process] I never thought about these issues. (52-year-old female interviewee, long-term resident)



Figure 3. Left: A developer ‘cheating’ by ‘improperly’ pouring water into concrete. Right: the ‘failure’ to comply with construction requirements (captured by a 51-year-old, long-term resident)

This statement acknowledges that learning new skills and knowledge exchange through the process were elements of engagement between residents and the local office, resulting in building trust between the community and local authorities as well as mobilising individual residents to participate in the photovoice method. However, this may not be true for all the participants. A ‘retired plumber’ who had been a resident of the area for most of his life, captured a photograph showing how a concrete mixer truck was turning into their lane (Figure 3, left). During the interview, he interpreted the photograph as a ‘deception by the developer’, and elicited his related knowledge on concrete constructions. He stated:

He [the worker] was pouring water [into the concrete] and as you know, time is very important in concrete construction, but they were late... he stopped only after he saw I was taking a photo! The developer is cheating; he cheated in his previous buildings as well, for instance, the building on the corner [pointing in the direction]. Its walls are really weak. (51-year-old male interviewee, long-term resident)

By giving further examples, this local resident expressed his concerns about building trustful relations with the developer, and highlighted the issues in the construction process that were not considered or mismanaged by the developer. For this local, building trust with the developer was achieved by relying on his prior experience and knowledge of construction. He pointed at the photograph in Figure 3 (right), paused for a second, and then continued:

As I was not able to take a picture of the cement [concrete], I selected this view. Look at the new structure. Even the developer told me: “please do not

take a picture". I said: "I cannot, you cheated in the construction of the earlier building and now you are doing so again". I think the developer is angry with me. (51-year-old male interviewee, long-term resident)

The local's professional knowledge of construction made him aware of the construction process. He attempted to reveal his knowledge through details such as, '...this building has been constructed on unstable soil. In this case, you should go deep enough to reach the stable soil, and also the soil should be reinforced by several props in the ground. The developer went down less than two metres...'. The local believed that the building did not meet construction standards for resisting an earthquake. In contrast, when the developer was constructing his own unit, he complied with construction standards. To this local with existing knowledge of construction, the process of construction was one main way to build trust in developers. He also accused another developer of having an incorrect relationship with the legal supervisors who tested the concrete. Although this local resident trusted in his developer, his mistrust in other developers might have made him dissatisfied with the place during the construction, indicating the dynamics of interactions and power relations between the local community and developers in enhancing their place dissatisfaction.

4.2. Photovoice of the physical-spatial outcomes of urban redevelopment

4.2.1. Transformation and residents' perceptions

One richly illustrated narrative documented and reported as an undesirable physical outcome of urban redevelopment in the neighbourhood was the perception of 'living on a construction site'. The research participant who captured Figure 4 interpreted his photograph in '... three views. This building [the right] is completed, this one [at the background] is close to being finished, and the other one is under construction. I wanted to show that here is under construction ...'. To this long-term resident (over 60 years), the built-environment elements were at different stages of the redevelopment process at the time of data collection. He did not perceive the living area as a stable residential neighbourhood but, rather, perceived it as a large-scale building construction site, which did not meet his expectations for the place, especially since 2013, when many of the redevelopment initiatives began.



Figure 4. ‘Buildings at different stages of development’, photographed by a 65-year-old, long-term resident

This mismatch between the residents’ expectations for their place, and what they daily perceived in the built environment may have contributed to dissatisfaction and complaints. Daily observations reported a messy milieu and demolished buildings, leading to typically negative connotations, such as ‘decaying urban areas’ and other social and cultural issues. A 52-year-old retired woman, who had lived in the area for over nine years, was living among new and destroyed buildings, and this did not meet her expectation for an urban area. She unhappily stated:

As we live within a city called Tehran, the environment should be appropriate and clean, but here it is not, it’s a decaying area, neither beautiful nor clean. Look at this photo [Figure 5, left], a destroyed building adjacent to a new building or this photo [Figure 5, right]; it is a home, but it does not look like a home. (52-year-old female interviewee, long-term resident)



Figure 5. Left: ‘a destroyed building adjacent to a new building’. Right: ‘a building that does not look like a home’ (captured red by a 52-year-old, long-term resident)

The intensity and duration of the environmental changes certified the perception of living on a building construction site. Since the sense of the place before being settled had changed, the residents could not construct a stable sense of the place, and they even felt lost within it. Living in a place that presented a different facade every day disturbed the feeling of being stable. In the residents’ view, the constant changes in the urban landscape ‘...damaged the [street’s] facade...’ (65-year-old male interviewee). This fact also contributed to their place dissatisfaction, although some had become used to it. Another local resident showed disappointment when she stated: ‘I have been seeing this window and building for a long time like this [Figure 6, left], they have been left like this!’. Once the residents perceived that the changes within the environment were constant and/or faster than they could settle with them, they felt increasingly dissatisfied with the place. Gradually, this constant place dissatisfaction conveyed the locals towards the point of reaction. The resident continued:

My purpose for this photo [Figure 6, right] was the street’s ground; it’s a long time that it has been left like this... I phoned the municipality several times. I know they are constructing, but the overall atmosphere of the alley must be better. After that, they asphalted some parts of the alley. They said, due to the presence of heavy trucks, we can’t asphalt the entire path. (52-year-old female resident, long-term resident)



Figure 6. Left: ‘a window and the building left in an inappropriate condition for a long time’. Right: ‘damage to the street’s ground’ (captured by a 52-year-old, long-term resident)

In the bazaar, research participants also narrated some undesirable spatial changes as an outcome of the redevelopment in their area. For instance, a shop owner at the bottom of the bazaar perceived a sense of a ‘cold feeling, specifically, because it is roofed! In the early mornings and late evenings or a holiday, you would see only an empty space, and it was not like this before! There is no one here! ... I agreed with the redevelopment, but not with this roof and those thick vaults! It has made it very heart-rending here! ... I wish we could have both: shadow and sunlight’ (51-year-old male interviewee). During the interview, he pointed to the photographs as narrative evidence (Figures 7–8). This local was dissatisfied with the new enclosed space because it had intensified a sense of emptiness. Furthermore, he predicted more darkness and a sense of dissatisfaction with the bazaar path after the completion of one left vault in the middle of the bazaar, which can be seen as the bright spot in the background of Figure 7. The shopkeeper who captured these photographs favoured the space of an adjacent lane to the bazaar where shop owners ‘roofed their path with canvas by themselves’ (47-year-old male interviewee). The comparison of these two spaces revealed differences between the reconstructed space and a space that the shopkeepers felt more comfortable with.



Figure 7. A ‘cold’ and ‘empty’ space of the bazaar path in an early morning, photographed by a 47-year-old, long-term shopkeeper



Figure 8. A ‘warm’ and ‘crowded’ space in the bag exchange in Hakim Lane, photographed by a 47-year-old, long-term shopkeeper

The key difference was not only about shadow and light in these two places (Figures 7–8) but also about the presence of people. The adjacent lane is an exchange market, in which you can see

more women and children, particularly during the school term. In addition, houses behind shops in the lane, which had converted to warehouses, were used as dormitories for labourers. This means that after working hours, the lane was not a completely dead space. Therefore, the presence of people, light, and shading elements made the shopkeepers perceive the newly reconstructed bazaar path as ‘cold’ and ‘empty’, and Hakim Lane as ‘warm’ and ‘crowded’—indicating the loss of certain habits in the environment. The evidence shows that during the late Qajar period (1787–1921), the traditional bazaar used to be a dark and cool space with little roof light (Figure 9, left). In the first Pahlavi era (1921–1941), the bazaar was rebuilt using a timber frame gable roof through which natural light and air could reach the bazaar path, and this remained relatively unchanged until the recent development in the last few decades (Figure 9, right). The experience of working in a bright space was a common, collective memory for the shopkeeper community, but the dark and cool space with arched vaults as a spatial outcome of the redevelopment had changed it.

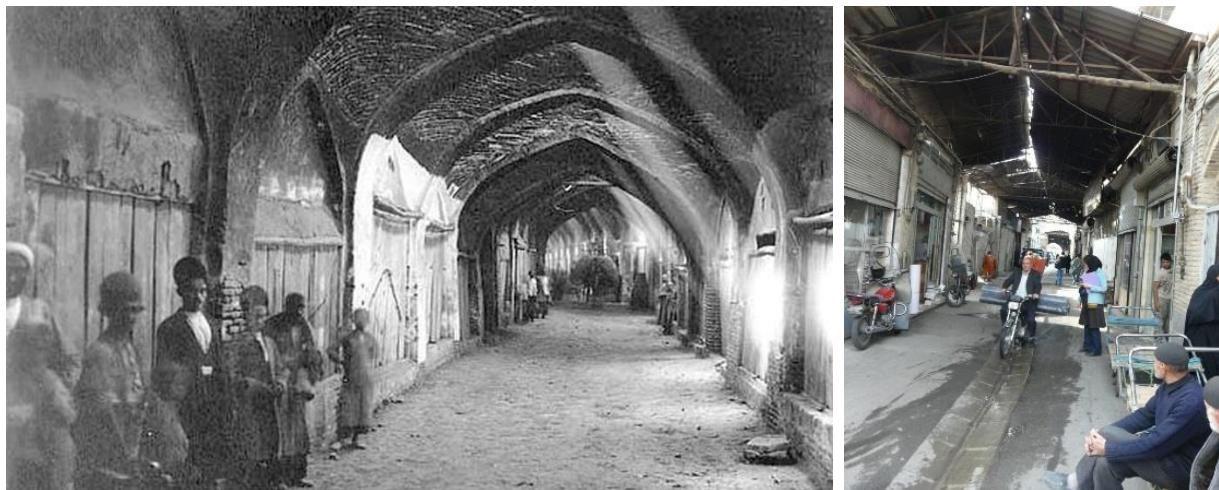


Figure 9. Left: The bazaar path in the late Qajar period. Right: The bazaar space before the redevelopment (Source: Tehran Municipality Archives)

5. Discussion

Returning to the research questions posed in the introduction, it is now possible to discuss the utility of photovoice for the identification and understanding of redevelopment processes and outcomes, and address the particular epistemic and methodological limitations of photovoice within the urban redevelopment context, including the research process, its potential, and associated challenges.

5.1. Place making and heritage, sense of place and attachment

The current study found that greater urban heritage awareness was a procedural outcome of the experience in place making, for example, as elicited through a photograph of an object which stimulated a shopkeeper's senses and interests in the exploration of the built environment (Figure 2). This finding supports the significance of using a single or a series of photographs as 'tangible visual stimuli' in eliciting underlaying personal perceptions and intangible meanings (Harper, 2002; Johnsen et al., 2008; Madgin et al., 2016; Heng, 2018). This has important implications for using photovoice as a 'communication bridge' (McIntyre, 2003; Ronzi et al., 2019) to understand and exchange multi-layered data (here, individual/collective meanings and attitudes towards a historic commercial environment during a redevelopment process) between research participants and researcher (and readers). The method offers researchers the opportunity to demonstrate the use of heritage meanings and values in urban place making in further shifting the local community focus 'from object to process, outcome and utility', which is valued as the heritage paradigm (Pendlebury & Porfyriou, 2017, p.430). This supports the application of the method in exploring study phenomena that are dynamic and complex socio-political processes, such as involvement in urban redevelopments to demonstrate the articulation of local interpretive meanings and changes in those meanings as the process progresses.

A cognitive sense of identity and belonging were expressed as an outcome of the individual experience of urban changes, referred to as heritage awareness. This result can be explained by the fact that '... the search after the 'real' meanings of places, the unearthing of heritages and so forth, is interpreted as being, in part, a response to desire for fixity and for security of identity in the middle of all the movement and change' (Massey, 1991, p.26). Affective and functional meanings were associated with the outcomes of changes in spatial features, such as light and shadow, which is often described as 'place attachment' (Stedman et al., 2004, 2014). All these imply that the application of the photovoice method is effective in exploring and evaluating the meaningful outcomes of environmental changes, whether associated with climate changes and landscape values (Beilin, 2005; Dandy & Van Der Wal, 2011; Bennett and Dearden, 2013), place-based health programmes (Dennis et al., 2009; Ronzi et al., 2019), or urban redevelopments, as in this study. This is a strong indication of the capacity of photovoice to

evaluate urban redevelopment projects by investigating ‘sense of place’ (Erfani, 2020), as the method provides insight into cognitive-conative-affective meanings that citizens may attribute to their places and/or processes of change.

Photographs are tangible resources, enabling research participants to visualise their narratives about urban place making and change. Inhabitants visually evoked redeveloping residential and commercial spaces in ‘gentrified areas’, while assessing the physical and socio-cultural conditions of their ‘urban vernacular landscapes’ (Krase, 2012; Saleh, 2000). Narratives accompanying photographs revealed insight into the use and adaptability of original urban redevelopment plans, the engagement process and trust building, and showed their suitability for heritage awareness or enhancement through a visual-analytic lens. The operationalised strategy to engage and build trust, which included the owners but excluded the tenants, served as a tool to divide social groups. What this evidence implies is the capabilities of a visual-based approach for studying ‘urban vernacular landscapes’, to show how a redeveloping built environment reflects socio-cultural and spatial identities (Shortell & Krase, 2010). Such visual transformation is a result of the ‘economic, social and cultural forces’ shaping the process and outcomes of urban redevelopment (Krase, 2012, p.25).

5.2. Epistemic dimension of photovoice in urban development studies

As the photographs and consequently the attached narratives are unique, photovoice includes ‘a high level of subjectivity’ (Warren, 2005; Liebenberg, 2018), leading to criticism of the method. At the heart of this critique, there are epistemic uncertainties associated with the interpretation of photographs, narratives, and the validity of the findings. Nevertheless, photovoice methods allow research participants to be ‘unique’ in their narratives (Clark-Ibáñez, 2004), while simultaneously providing an opportunity for the researcher to reach and frame different perspectives on specific processes and their outcomes, as the results of this study demonstrate. The epistemic significance of this fact is the potential to understand how different socio-economic stakeholders personalise, narrate, and reflect on their everyday lived experiences in urban redevelopment as a shopkeeper, grocer, retired resident, developer, tenant, most/less benefited by the redevelopment, and other socially constructed groups. Such narratives and reflections are valuable input for decision makers and local authorities when considering the

inclusion of all stakeholders, and institutional responsiveness to the needs and desires of the local communities involved in the redevelopment process (Chaskin et al., 2012; Rigon, 2014; Erfani & Roe, 2020).

The result referred to as a perception of ‘living on a construction site’ reflected the use and ability of a photograph to narrate a three-time frame, the past, present, and future of housing developments in the area, and the meanings associated with individual experiences. The integration of multiple time frames into a single photograph allows for simultaneously interpretation. It also shows the potential of photovoice when used in a ‘creative’ way to illustrate and summarise ‘multiple narrative meanings’ (Stedman et al., 2004; Beckley et al., 2007) that constitute the conditions of everyday life in the residential neighbourhood as an outcome of a rapid and chaotic redevelopment. The use of photovoice as an investigative method allowed the participants to develop some degree of ‘ingenuity and imagination’ (Wang, 2003, p.193) in photographing meanings that are not easily visualised, as expressed by the participant who had ‘... never thought about this stuff, but today I [she] like to do this kind of task’ (52-year-old female interviewee). However, most of the participant-generated photographs used in this study illustrate a more realistic way of recording valuable instances of encounters with people and places rather than creative evocations. Recording such visual documents of memory and everyday engagement with places helps that ‘the places of significance to photographers are not omitted from analysis due to a researcher’s preconceived notions of what these might include, and that photographers have a tangible opportunity to describe their perceptions of those spaces’ (Johnsen et al, 2008, 196). Through the analytical process of creating photographs, the research participants practice the inclusion or exclusion of particular spaces, others and framing them—providing an insightful window into ‘the construction and dynamics of place’.

The nature and use of photovoice as auto-photography in generating photographs allowed the research participants rather than the researcher to lead and reflect on their individual experience of engaging in a redevelopment process and its outcomes, and what these mean to them personally. The participants used photographs to elicit knowledge exchange and learning as outcomes of engagement, as well as the nature of relations between themselves and the local authorities during redevelopments. They understood urban redevelopment as ‘an ongoing

process that has no determinant end form' (Bacon et al., 2008, p.33) driven by 'large anchor institutions', such as municipalities (Patterson & Silverman, 2013) with different socio-economic, cultural and spatial outcomes. When the redevelopment continues for a long time, more than what research participants expect or have been informed of, the narrative outcome is a perception of 'living on a construction site' or 'stagnant business'. When the redeveloped place does not meet their functional and spatial expectations compared with before the intervention (such as the redeveloped bazaar being darker than the shopkeepers expected), an emergent narrative is the loss of certain habits of environments and place dissatisfaction. All these results contribute to the fact that the photovoice method reduces 'differences in power, class, and knowledge between researcher and researched' (Van Auken et al., 2010, p.373) to gain an in-depth understanding of how urban redevelopment in Tehran happens and changes the relationships between people, places, and institutions.

5.3. Ethical and methodological considerations in using photovoice

The experience gained through this study indicates a range of ethical, practical, and methodological considerations for the studies using photovoice. Socio-cultural and legal differences influence the way we may conduct *auto-photography* as a method for producing interpretive data (Johnsen et al., 2008). People, specifically the females, in these case studies, as in most Islamic cultures, are often sensitive and/or reactive to cameras (Thomson & Greenwood, 2017) and tension can occur if permission to be photographed is not requested. This was not the case in this study since the REP method (Stedman et al., 2004; Beckley et al., 2007) was adopted, in which research participants were aware of the socio-cultural norms. Research participants (specifically males) were aware that taking a photograph of a woman (or a group of women) in a public space requires their permission, while members of the public in the UK can freely take picture as long as you are conducting the photography in freely accessible space and it is not for criminal or terrorist purposes (Metropolitan Police, 2018). This highlights the importance of considering reasonable community standards and visual ethics (Clark, 2012) before producing any photographs.

Capturing a photograph to represent the 'improper' activity by the developer reveals how photovoice methods result in reflexive and negotiated processes about the research topics, rather

than simply ‘giving voice’ to individuals and communities (Luttrell & Chalfen, 2010; Couldry, 2010; Fairey, 2018). The research participant’s action in capturing Figure 3 produced a reflexive negotiation between himself and the developer—narrating a certain set of power relations and patterns of control in the redevelopment process. The researcher utilised the photograph as a starting point to communicate the complex process of engagement, trust building, and place making in the context of urban redevelopment. The photo-based narrative then emerges as ‘a negotiated, uncertain and emergent practice’ (Fairey, 2018, p.112), which needs to be understood within a context in which the research participant is not only viewed as a co-participant; rather, the participant should also be viewed as a local man with life-long residence in the area, and more importantly, as a ‘retired plumber’ with previous experience in construction, which fosters his will and ability to challenge the construction quality from a position of knowledge and control. The unexpected encounter and challenge between the resident and developer created an uncomfortable space, revealing existing social conflicts in urban redevelopment contexts. However, as this example implies, there are potential tensions and risks in using photovoice methods when led by research participants. While acknowledging the complex context in which urban redevelopment processes evolve and involve power and socio-cultural factors, it is the researcher’s responsibility to consider and minimise such potential risks to individual human research participants.

A general methodological concern in conducting research in urban redevelopment contexts is reducing any influence from the research topic and researcher on the research participants in producing and interpreting data. Photographs, interviews and responses can be influenced by the self-reporting or social desirability bias if research participants relate the research purpose and interview questions to official decision-making and planning authorities. As reported earlier, some interviewees may prefer not to mention or only refer indirectly to a high-level of satisfaction with redevelopment outcomes, if they believe that their satisfaction will negatively influence future urban redevelopment in the area and decisions taken by authorities. Integrating interactive photovoice with photo-elicitation interviews can reduce this methodological concern when studying urban redevelopment. However, the practicalities of conducting photovoice methods are more challenging compared to the traditional methods of word-only interviews and focus groups (Johnsen et al., 2008; Meo, 2010). Further time is required for data preparation,

collection, and analysis. As discussed, research participants need to be appropriately briefed and fully informed about their involvement in the research, what to take photographs of, how to transfer their photographs, and other practical and technical considerations (Clark, 2012), which may not be exclusive to this study.

6. Conclusions

The experiment of using photovoice allows scrutiny of the areas undergoing urban redevelopment and its outcomes, which can be challenging and engaging for both research participants and researcher. The main strength of this method lies in the potential contextual and analytical richness of the photographs produced by research participants, combined the accompanying narratives. Photovoice as the multi-faceted source of data for interpretative possibilities is highly effective at eliciting tangible and intangible meanings in relation to different outcomes of urban redevelopments. Research participants narrate their unique (multiple) meanings through realistic and creative visual images, and highlight their subjectivities and experiential knowledge. Photographs of residential and commercial areas under redevelopment, the spaces, practices, and objects that research participants referred to as important in their homes and shops, and what they marginalised within their photographs, provide descriptive, explanatory, and interpretive evaluative meanings in relation to urban redevelopment processes and their outcomes.

The method was able to capture the intangible meanings embedded in photographs as heritage recognition, stakeholder engagement, and power relations that are crucial elements of involvement in urban redevelopment and decision-making processes. Conducting research in the context of constant urban change, as these research participants noted, reflects the nature of planning and developing policies, and community expectations. This indicates a definite need for ongoing assessment of urban redevelopment processes and their outcomes not only in the planning stage but also during the reconstruction and in-use stages. Reconsidering a planning process that acknowledges and encourages the need for assessment and protection of the life and business of different stakeholders at different stages enhances the quality of outcomes and enrichment of redevelopment processes. Overlooking these facts can lead to place dissatisfaction

and a perception of ‘living on a construction site’. For these reasons, the perceptions of local inhabitants should be a major factor in the planning and management of urban habitats.

However, this implication does not rule out the value and importance of ‘external place/neighbourhood reputations’ as perceived by non-residents and prospect residents (Permentier et al., 2008).

Like most case-study based research, although the results of the present study permit some speculation regarding using the photovoice method in studying urban redevelopments, it has its own limitations and recommendations for follow-up research. Further longitudinal studies with more cases are required to determine whether the results of this study are applicable to other cases, and whether the method adopted by the study is sufficient to stimulate citizens to articulate their perceptions and narratives on urban redevelopment processes and their outcomes.

Acknowledging the limitations of the generalisability and the epistemic uncertainties around photovoice methods, this study recommends critical discussion of the limitations of developing and implementing these methods in urban redevelopment studies. Such discussions will advance our understanding of the epistemic and methodological limitations of photovoice within different urban redevelopment contexts and the research process, as well as its power, potential and challenges. The study suggests holding public meetings to inform and update the communities and research participants about the results of this study, as a sign of ethical and social respect to the locals. This provides a unique window to observe and evaluate the reflections of the communities and research participants on the results of this study: whether they hold similar narratives or substantially new interpretations. If yes, how and to what extent the new narratives should be interpreted by the redeployment processes and outcomes needs to be considered.

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