

The potential of visualisation in a transdisciplinary research process

Dr. Bettina Kolb

University of Vienna, Department of Sociology, Faculty of Social Sciences

Oikodrom - The Vienna Institute for Urban Sustainability

Bettina.Kolb@univie.ac.at

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Summary

Transdisciplinary research combines scientific knowledge with tacit knowledge in a specific social system. In this dialogue the limits of languages and understanding between the scientific community and the local residents must be considered. Visualisation and the use of photography with the method of photo interview can help to bridge this gap and support communication. In the photo interview visualisation is integrated in an active participatory process: e.g. the dwellers of a neighbourhood are invited to contribute their knowledge to a scientific process by taking photos and discussing them in an interview.

The paper discusses the method of photo interview (Harper 1987, Wuggenig 1990) as a potentially valuable approach in transdisciplinary projects, introduces experiences from the ongoing project HAMMAM, Hammam, Aspects and Multidisciplinary Methods of Analysis for the Mediterranean Region¹ and suggests further strategies for development of the method. The photo interview can be applied in various fields of social research, especially when the subjective value of the respondents is sought in a context of high respondent involvement and open communication between researchers and respondents. The method allows researchers to collect data of two different types: visual data - photos and verbal data - interviews. The method strengthens the quality of respondent communication and empowers respondents in the research process.

Reflections on the experiences of visualisation in the inter- and trans-disciplinary project HAMMAM, which develops strategies and designs new concepts for adapting the traditional features of the hammam features into contemporary Islamic life, will also be provided. New strategies of involvement and empowerment in transdisciplinary research by applying visualisation methods will be introduced.

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(1) Hammam, Aspects and Multidisciplinary Methods of Analysis for the Mediterranean Region, EU granted project, FP6-2003-INCO-MPC-2, Nr. 517704. 2005-2008; Coordinator: Oikodrom, The Vienna Institute for Urban Sustainability

Introduction

The presence of photos and images in society is an incontrovertible reality, if daily life is observed, and visual material has an important impact on daily life decisions. Photos and images are part of day to day life in media, education and provide visual facts of cultural routines in our modern societies. But this current feature of visual practice has a long tradition in cultural tradition and historical developments. Our current societies are based on a long tradition of use of visual characters in several aspects of life. For example, paintings were used to educate people about religious places and stories, and portraits were used to represent power and governance. Visual codes have been a part of communication in our society since the very being of human societies, but in the past were excluded from our approaches to social research.

This paper shows how the photo interview method, with its potential of visualisation and good practice in working with visual material, supports communication in a trans-disciplinary research process. The trans-disciplinary process is a given framework in the research project. Cooperation with local people, who contribute their local tacit knowledge, is a basic condition of this research. This trans-disciplinary research is a form of common knowledge production that brings together scientific knowledge and tacit local knowledge for the purpose of common knowledge production. Trans-disciplinary research involves the integration of scientific knowledge and tacit knowledge from non scientific partners to establish a communication process between scientists and the public.

I. The HAMMAM project*

This inter- and trans-disciplinary research projects takes place in six Islamic Mediterranean countries: Morocco, Algeria, Egypt, Syria, Turkey and Palestine. Its aim is to develop inter-disciplinary future strategies for the hammam building and its neighbourhood by designing new concepts for adapting the traditional hammam features to contemporary Islamic life. Although the function of the hammam includes part of the Mediterranean civilization with its complex urban and social relations and various functions, the question that drives this cultural heritage project is, whether the hammam is still part of contemporary life. Further, how can the conserved and renovated Islamic bath house contribute to a 21st century life style for a human's well-being within the limits of nature following the idea of Brundlandt Report - "Our Common Future" in 1987? Is the protection of a cultural heritage in conflict with contemporary life? Is it possible to combine and reconnect the history of the hammam with the daily life of people in the 21st century? In the course of the participatory field work, the team of social scientists assesses the opportunities and possibilities for the use of the hammam by local inhabitants of the area and describes the problems and potential of the social life of this community.

* Hammam, Aspects and Multidisciplinary Methods of Analysis for the Mediterranean Region, see above

This inter- and trans-disciplinary project is supported by researchers from different subject areas, including arabistic, art, architecture, building ecology, chemistry, ecology, economy, history, linguistic, participation, restoration, sociology, urban planning, and water pollution control.



Photo 1: Entrance of a hammam, Damascus 02/07

In the dialogue of trans-disciplinary research, the limits of languages and understanding between the scientific community and local residents must be considered. Visualisation and the use of photography with the method of photo interview can help to bridge this gap and support communication between these groups. The process of trans-disciplinary research encourages the exchange of roles and experiences, establishes symmetric communication between researchers and the community being researched, and generates a bottom up understanding of local experience.

In participating in this research process as a social researcher, I have observed that visualisation contributes to the communication process in trans-disciplinary research in the photo interview itself and also among scientists from different disciplines as they use visual material. These conceptual understandings include the following three theses of visual understanding as basis for studies.

1. Visual signs are part of the cultural understanding (Umberto Eco 1977, Roland Barthes 1985);
2. Visual material helps to understand and recognise the context of an issue;
3. The capability to codify certain content in a visual image is experienced in cultural learning and part of the societal experience.

The established reception and the process of decoding of images are highly influenced by the culture of a society (Eco 1991, 195). Technological improvements, e.g. technological developments of different communication media on the one hand, as well as cultural and historical processes in painting and arts, affect the reception of images. Members of a society learn through their cultural socialisation

to understand and decode visual information. This understanding enables members of a society to decode images in several media, such as television, and they are part of a societal communication process.

II. The Photo Interview Method

The trans-disciplinary research process is a setting in which the photo interview as a qualitative, participative and visual method illuminates a setting's specific qualities. The photo interview can be applied in various fields of social research when it is useful to bring out respondent's subjective values by engaging them in a process that entails high involvement and encourages open communication. With the photo interview method, the researcher collects data of two different types: visual data (photos) and verbal data (interviews). The method strengthens the quality of respondent communication and empowers respondents in the research process.

The photo interview is an active, participatory, research process and social research methodology (Wuggenig 1990) in which research participants take photos and interpret them in an interview. It begins as photo interviewees are introduced to a specific research process, and continues as they shoot their photos and use them to explain their daily life experience to the researcher. Once the photo interview is completed, the photos and the interviews are available data material for further research and sociological interpretation using different forms of scientific analyses.

In the photo interview, visualisation is integrated in an active participatory process: e.g. the dwellers of a neighbourhood are invited to contribute with their knowledge to a scientific process by taking photos and discussing them in an interview. The photo interview process (Kolb 2006) involves three phases:

- (1) The opening phase
- (2) The active photo shooting phase
- (3) The decoding phase

(1) The opening phase

In the classical process of the photo interview respondents are invited to take photos considering a general research question. This starts a process where interviewees reflect on the scientific question and its influence or meaningfulness for their own life concept. This process I will designate the "*opening phase*". Respondents receive a disposable camera and are introduced to its technical aspects.

(2) The active photo shooting phase

As a second step, respondents conduct this reflection in an active process of reflecting on their social and material surroundings and deciding what to photograph. This phase I designate as the “*active photo shooting*”. This phase is accompanied by an encoding process as respondents find visual expression for their specific concept of present reality.

As societal members – experienced in cultural language – the respondents express their opinion with visual expressions. For the photo interview as a participatory tool, the phase of active photo shooting is a key element.

(3) The decoding phase

The third phase is the time when the respondent reconsiders the photo and verbalises its meaning in the interview, which I designate as the “*decoding phase*”. During this phase, respondents reconsider the photo and use their societal knowledge in encoding and decoding visual information contained in the image.

The process of decoding this visual information takes place in the photo interview while the respondent and researcher are regarding the photos taken by the respondent. This is the moment when the interviewee introduces the researcher to his approach to the empirical situation of social facts in a visual way.

The respondent decides which photo he or she wants to discuss with the researcher. The photo interviewee describes why he or she took the photo and what the researcher should learn about the image.



Photo 2: Respondents discussing photos, Ankara 07/06

Describing the photos from the point of view of the photo interviewee starts a dialogue between the interviewee and the researcher. It is not just discussing a photo, it is also the end of the photo interview process (see above), where a visible product shows a specific decision about the expression of social reality from the perspective of one individual. The interviewee brings material into the interview that illuminates his paradigms, arguments and approaches from his specific viewpoint. These arguments by the interviewees in the form of photos build up a new role for the interviewee. This process provides an opportunity for the respondent to take on the role of expert about a specific life or spatial situation which the researcher wants to study. This process makes the dialogue between researcher and respondent more symmetric and can be seen as an important characteristic of the photo interview (Wuggenig 1990, p 112). On the one hand the researcher studies a new social world; on the other hand the respondents themselves gain new insights into their own reality by using the visual material to reflect on their situation. Respondents receive the photos as a gift, what is particularly important if research takes place in an underprivileged social situation with people for whom photography is not a part of their daily life situation.

Once the three phases of field work described above are complete, the produced data, photos and interview text are ready for scientific interpretation.

The contribution of visualisation to the trans-disciplinary process

Visualisation, a continuous working with visual material, in the research process is possible because of the active involvement of respondents in the production and interpretation of visual material. The active involvement of the respondent in the fieldwork stage, both during the phases of active photo shooting and decoding, means that the respondent is a researcher of his own culture. In the process of active photo shooting, the respondent introduces research topics into the study in a holistic visual way. The direction of the research depends on the respondent's personal approach to the act of taking a photo, whether he plans and designs a certain photo or acts in an intuitive way. In the process of decoding the visual material and discussing the photo in the interview, new aspects of the image can become visible, even for the respondent-photographer himself (Wuggenig 1990,112).

In the interview, researchers learn about the existing and tacit knowledge of the interview partners and about local potentials. The setting of the photo interview helps to motivate the respondents to participate in the interview (Wuggenig 1990, 112) and establishes an opportunity for a symmetric dialogue between researcher and interviewees. With the visual material, the interviewer can follow and integrate the everyday perspective and tacit knowledge of the respondent.

The data material of the photo interview

The data material of photo interview is two-fold: the photo, which can be seen as having autonomous impact and the interview when the photo is discussed. Ideally the interview produces a "reading" of the photo that supports the respondent's conception of world. The respondent who told us

“I know all people from the beginning of the street till its end,” (Photo interview 01, Cairo 02/06) provides an example. He was explaining his photo in which a man stands on the edge of the street beside a chair. On the left side of the image, one can see the head of a young boy. On the opposite side is the open entrance of a house and a closed roll bar from the entrance of a shop.



Photo 3: Photo interview, Cairo 02/06

The photo thus is data that can be analysed using different methods of interpretation (Oevermann 1995, Englisch 1991). A description of a photo is a listing of the main contents of the image. But the photo itself doesn't explain what is important in the image from the perspective of the photographer; it has no priorities for the reception. It doesn't show *what* is important on the visual information (Becker 1986).

A further process of decoding the visual information of the photo is a next step. In this process, details of social life and new information included in the photo by chance become visible, as the interviewer asks the respondent about the image during the interview. In this example, the respondent explained that this photo shows a man who is living in the neighbourhood of the hammam Tambali, and that this man was using the hammam. The respondent introduces the fact that this man, in the photo, was using the hammam Tambali, when it was working. The respondent explains the importance of the hammam by taking a photo of his neighbours, who were going to this place. The respondent also frames a picture of a familiar neighbourhood, populated by people who know each other. In the process of decoding the image with the researcher, the respondent sees that the hammam Tambali was an important meeting point for the neighbourhood.

Another way of interpreting the photo material can be shown in an interpretation of stand point, or the place where the photographer was standing while taking the photo. This is an interpretation of the act of “taking a photo” and can provide important material for an analysis of the neighbourhood and its borders, or for an analysis of the local places which people from the neighbourhood visit on specific or daily occasions.

The data in the photo interview process are available for different forms of qualitative interpretation levels, depending on the research question. The photo as well as the interview can be

material for interpretation. These data can be used for describing the manifest contents of the text (Mayring 1996) or in a hermeneutical interpretation (photo, interview) to explore meaning (Oevermann 1998), as well as to describe action—e.g., the places where the photos were taken, which can be useful for analysing the neighbourhood, for example.

III. Practice of Visualization

The inter- and trans-disciplinary HAMMAM project has provided a positive setting for developing certain strategies of visualization in the field study work. For example, researchers from several different subject areas work together and establish a communication process that contributes to mutual learning in the consortium. Working with visual data contributed to this cooperation and supported knowledge exchange and understanding among scientists from different subject areas. For the trans-disciplinary process also, the visual data encourages dialogue and exchange with local residents and hammam users while allowing researchers from different subject areas to bring their experience of visualization into this mutual learning process. Further, the photos from the photo interviews are also used as visual material for a public presentation, when preliminary results from the field study are shared with the public. This provides another opportunity to discuss topics with interviewees again and to support understanding and communication.

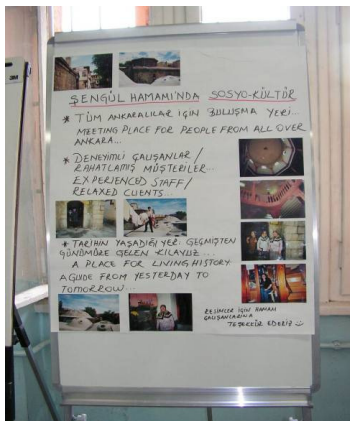


Photo 4: Photos from photo interviews in Ankara, presented on the public presentation 07/06

Public presentation: The concept

The project's researchers present the preliminary results of the case study to the local public in a public presentation, for the purpose of representing the view of local people on their neighborhood and showing others the daily life perceptions and value concepts that emerge during the research phase. Thus, photos from the photo interviews can be used to represent and reflect a certain reality as part of a public exhibition in which representatives from all different subject areas participate with posters created using handwriting, photographs and drawings.



Photo 5: Preparation for the public presentation, Damascus 02/07

This public phase allows scientists to highlight some of the preliminary results and prompt public discussion of information from a variety of sources. It allows researchers to make their arguments using visual material related to their discipline (maps, architectural drawings, photographs) as well as visual material created by the local people in the photo interview and also collected during other aspects of the research.

The public presentation provides an opportunity for discussion with the local public. In the case of the public presentation in Damascus, the project held the exhibition in the historical museum which was our field study office during the common field study.

IV. Visualization in a Specific Practice: Public Presentation

The public presentation is a specific practice of visualization and a strategy to establish communication among scientific and non-scientific persons. It provides an opportunity to share scientific information and results with non-scientific persons in a visual way and to invite non-scientific people to participate in a specific research process (discussions, ideas...) aimed at establishing identification with and engagement in the research process.

Visual material, from drawings, to photos, graphics, maps, and so forth, help to create understanding about the subject, focus, and results of research. In this sense, visual material is a basic medium for communication. It also provides opportunities for mutual communication among researchers, participants, and residents, and for a levelling of the power balance among these groups through discussion and an atmosphere of mutual learning.

Visualization for better communication

Visual material is applicable in different subject areas, in which researchers are using a range of strategies of visualisation, for example in the fields of art and architecture. Researchers learn from other subject areas, as I did in the HAMMAM project, in learning from architects.



Photo 6: Public presentation, Damascus 02/07

In turn, the topic of visual sociology that I brought into our project established the idea of participation with the local people and has represented a valuable aspect of our work. The photo interview method brings photos taken by local people into the research process, and expands our concept of participatory research to include the wider public in the public presentation.

V. Conclusions

Visual data (photos, drawings, and maps) are valuable material for research and public interests and can be data that support interdisciplinary research. Visualization supports trans-disciplinary research by supporting the communication process and helping to establish symmetric communication between researchers and local people. Using visual material, the social researcher strengthens the role of respondents in the participatory research process, resulting in a more equal partnership than is experienced in a conventional research process.

The photo interview, as a participatory method, initiates and contributes to a participatory research process using visual material. When used as part of an inter-disciplinary research process, the photo interview is an instrument for bringing out the values, experiences, and traditions of the local community using photos, images, and discussion and for developing a shared understanding of local and scientific knowledge using daily language and visual images from local residents' everyday lives.

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 Photos: Bettina Kolb, Photo 3/ Photo Interviewee

Remarks:

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