



Visually Researching and Communicating the City: A Systematic Assessment of Methods and Resources

LUC PAUWELS

University of Antwerp, Belgium

This article explores and discusses a wide variety of resources and research techniques to visually approach and/or communicate key aspects of mediated and unmediated urban contexts. Cities and city life indeed can be investigated in unique ways through the observation of behavior in public space and by critically scrutinizing the visible features of urban spaces as social and cultural expressions of past and present intentions. Distinct visual methods—exploratory, systematic, or participatory in nature—may help bring about the actual, changing, and often hybrid experience and appearance of urban areas and their inhabitants. Visual approaches to investigating the communicative dimensions of the city also comprise innovative uses of visual materials in the reporting phase through synergetic combinations of images and other expressive features.

Keywords: visual research methods, urban communication, photograph, material culture

Capturing, Analyzing, and Communicating the Mediated and Unmediated City

The emerging field of “urban communication research” comprises an invitation to look at the variety of intended and inadvertent expressions of the built environment and material culture, as well as how people interact with it and with each other. As such, it may help fill a void in the study of media, culture, and communication by emphasizing culture and communication as they are enacted on a daily basis and at the “street level.” Fierce advocates of the idea of the city as a proper “medium of communication,” Gendelman, Dobrowolsky, and Aiello (2010) propose looking at the city as “a laboratory to research diverse and often unconventional forms of urban expression,” as “a diverse spectacle composed of interwoven signs, competing stories, diverse actors, and social boundaries in constant flux,” and as “a hodgepodge of communicative genres” (p. 181).

Luc Pauwels: luc.pauwels@uantwerpen.be

Date submitted: 2015-06-15

To preserve and disclose this “urban spectacle” in constant flux, visual methods are of paramount importance. Therefore, this article explores and critically discusses the wide variety of visual resources and visual research techniques to study and communicate key aspects of the mediated and unmediated city and of city life from a sociocultural and communicative research perspective. Observing and recording the actual behavior of city dwellers or the material consequences of such behavior (“erosion measures” and “tactical” alterations of urban space, people’s “visualizations” of the city) can indeed reveal a broad array of knowledge regarding the actual, changing, and often hybrid experience and appearance of urban areas, including both advertent and inadvertent modes of communication.

Specifically, these communicative acts are conveyed through a host of “media” in a broad sense, from technological interfaces to directly observable visual expressions such as architecture, urban design, or displays of behavior in time and space. Metropolitan areas typically are extremely dense “hubs” of cultural expressions, and tapping into their visual dimension may help uncover the multiple and complex layers of embodied values, norms, and expectations. A distinctive feature of urban communicative space is its multi-authored amalgamated nature. Likewise, the many, often conflicting messages it “produces” are constantly shifting and seldom fully attributable to any one instance (not even to the most potent ones).

This contribution examines sources, tools, and methods to capture, analyze, and communicate the visual dimension of communicative urban environments, using existing visual sources as well as visual media as tools to both produce data (of material culture, media usage in an urban context, and human behavior) and communicate insights and views on the contemporary urban condition and experience. The visual methods and techniques discussed here are not exclusive to the study of urban communication, as they can be used for researching nearly any phenomenon that has a significant visual dimension and that may very well be outside this field of inquiry. However, an effort is made to illustrate each of the discussed methods and approaches as effectively as possible by using examples that focus on forms and strategies of urban communication, observing ways in which the city serves as a planned or unplanned medium for different forms of communication through various grassroots or official interventions, uses of technology, and types of intentional or unintentional “messages.”

Investigating the City Through Pre-existing or “Found” Visual Sources

One of the more obvious ways to study visual aspects of the urban sphere is to collect and analyze preexisting or so-called “found” images, visual representations, and artifacts. The potential benefits of using existing images or visualizations of urban society are manifold. First, the choice of existing visual materials and sources documenting aspects of the urban condition is very broad, diverse, and rich: from historical photographs made with documentary intent, family pictures, picture postcards (Figure 1) news photographs, and street photography, to artistic photos and other art objects, feature films, real estate pictures, magazine illustrations, drawings, architectural plans, maps, land use plans, CCTV footage, Google Earth View (Figure 2), and Google Street View (Figure 3), advertisements, and so on. The nature of such data sources varies from systematically to more opportunistically produced, from functional to artistic products, and may originate in the private or public spheres. Moreover, these huge repositories are becoming better organized as well as more widely accessible in today’s networked society (Figure 4). As such, they provide access to a wide variety of public and private worlds, potentially

traversing different cultures, and from times long passed to the nearly immediate present. Often this material is able to provide a unique "insiders' view" (in homes, institutions, neighborhoods, etc.). Having not been produced for the particular research use for which they later serve, such materials are, at least in this respect, "nonreactive" records, although of course they often should be considered as "performances" of some kind and for some purpose (cf. family snapshots; Chalfen, 1987; Musello, 1979; Pauwels, 2008a).



Figure 1. Postcard of Antwerp Central Station, the Queen Astrid Square and the Zoological Garden. Picture postcards, for a long time, were the only more or less systematic and publicly available repositories of "street views," although often limited to "attractive" or "historically important" sights.

The value of found material as data for urban researchers and urban communication scholars is linked to the intentions with which they were originally produced and depends on precise knowledge of the production circumstances as well as the broader sociocultural or political context in which they came about. Such visual materials that originate outside an explicit urban research context may be looked on both as cultural artifacts in their own right and as rich—although not unproblematic—gateways or windows to aspects of urban culture. Found images, however, often lack contextual information to some degree, as researchers typically have no control over, or complete knowledge about, the exact production circumstances (historical, technical, cultural) or the intended goals and uses. Yet, there are ways by which researchers may try to improve their knowledge about the causes and explanations of particular

appearances, for example, through well-placed informants and a variety of other sources of cultural, historical, and technical information, but it is seldom an easy task. Once collected and organized, the researchers face the difficult task of making sense of the visual materials in relation to their specific research interests. The primary purpose of a social scientific visual analysis is to discover significant patterns in the depicted (the “what”) and manner of depiction (the “how”) in order to subsequently develop plausible interpretations that link observations to past or current social processes and normative structures.



Figure 2. Satellite image of Antwerp's Central Station area.



Figure 3. Google Street View image of Antwerp's Central Station and Queen Astrid Square. Currently, researchers may study the visual dimensions of cities, both from an aerial and street-level view using preexisting and regularly updated visual repositories such as Google Earth. These images can be used as a tool to “map and survey” an urban area prior to a ground-level visit by the researcher. The researcher, however, must take into account that there may be a considerable time lag between the recorded images and the present state of the depicted site, as well as among the visual materials with which Google Earth is created.

Whereas the array of analytical tools and theoretical frameworks (e.g., semiotics, discourse analysis, content analysis, framing analysis, iconography, rhetoric, etc.) to examine visuals to date seems very broad (Berger, 1998; Kress, 2010; Margolis & Pauwels, 2011; Rose, 2012; Van Leeuwen & Jewitt, 2001), the majority of such approaches provide only a narrow perspective on the matter, and few scholars are consumed with the objective to integrate the valuable, yet partial, “ways of looking” into a more encompassing model for visual analysis. Moreover, many existing approaches lack clear methodological directions and often prove ill-equipped to disclose the complex layers of meaning of visual artifacts produced by distinct visual media. Ideally, a more integrated and explicit methodology focused on both form and content would serve as the basis for different theoretical and conceptual frameworks of image analysis, whether focused on quantifiable and manifestly present elements or characterized by more qualitative/interpretative approaches. Although many analytical frameworks seek to go further than quantifying a limited set of visual elements, they are and will remain cumbersome to apply to large sets of data (a trait or dilemma that applies to most qualitative approaches).

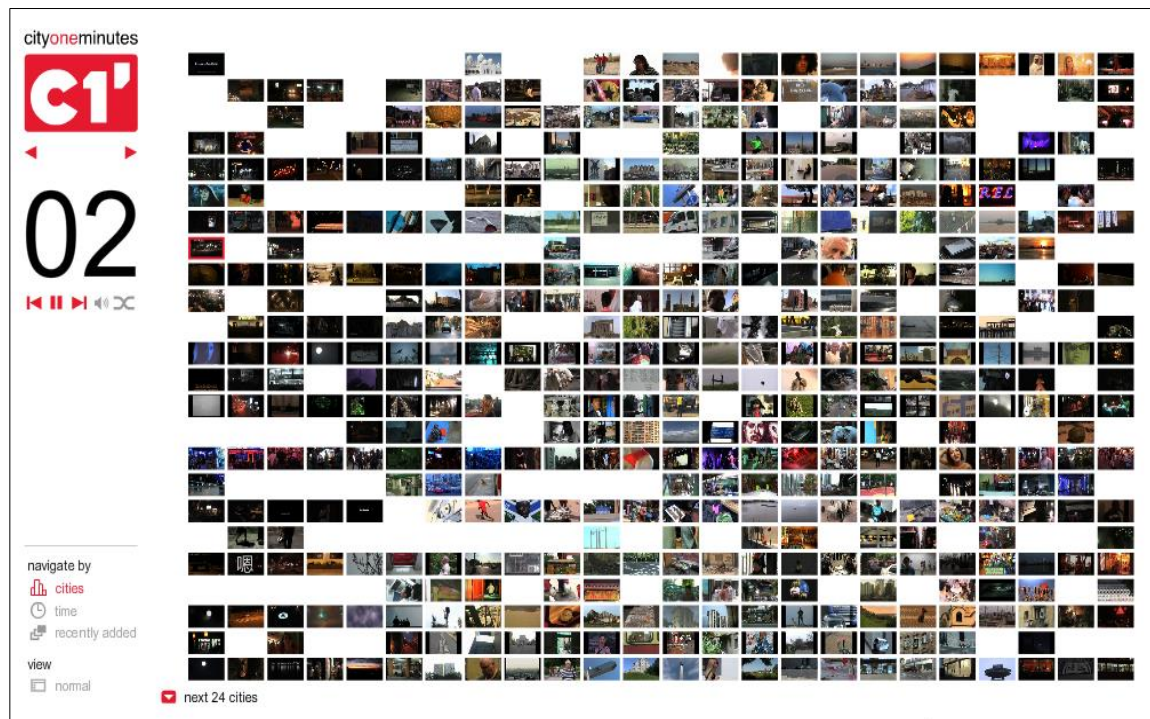


Figure 4. The “City One Minutes” project is an interesting online initiative to collect and disseminate different people’s views (as recorded in clips of exactly 60 seconds) on more than 100 cities. Although not set up as a scientific experiment, it is a useful (“found”) data source on residents’, tourists’, and artists’ personal impressions of a particular city at different hours of the day (<http://cityoneminutes.org>).

Researcher-Initiated Ways of Urban Visual Data Production

Apart from using existing visual sources to study the city and its communicative dimensions, researchers may also decide to produce new visual data in a variety of ways. This more active set of approaches to study the urban context through its visual manifestations involves various types of researcher-initiated ways of visual data production. Researchers may decide to produce visual data themselves for specific research purposes or prompt others (e.g., “respondents,” in this case, city dwellers) to do so.

Researcher-Produced Visual Data

An initial, very dominant, and varied way to more “actively” study the city through its visual manifestations (compared with using existing images) could be placed under the broad concept of the *mimetic mode*. Although direct (eye) observation (without mechanical registration and/or immediate transcription of the observed in words) remains a viable option—and in some sensitive or semiprivate environments the only acceptable option (e.g., a city hall or intimate situations, busses, lifts)—the mimetic approach comprises nearly all of the applications in which a visual recording device (mainly, although not exclusively, a camera) is used by the researcher for documenting meaningful aspects of visual reality to become newly created visual “data.” Gendelman and Aiello (2010), for instance, photographed building façades in different cities and looked at each of those fronts as a “communicative event that tells stories through its changing materiality, representing the building and its contents, but also the particular ideologies and power dynamics of the city in relation to its inhabitants and broader economic and political processes” (p. 256)

The mimetic mode typically seeks to exploit the reproductive or “imitative” qualities of the camera in circumstances in which the human eye is inadequate to capture the full richness of complex or fleeting events. In addition, the permanent and predictable character of the camera image and the ability to retain aspects of behavior or material culture more or less in their original context are powerful traits of this approach (Figures 5–10). For most social scientists, the “reproductive” or instrumental use of cameras and other image recording devices is the least controversial mode of visual research. Mimetic modes of visual data production often start with a distinct theoretical insight or research interest (operationalized in visual indicators) or are aimed toward answering particular research questions. However, this reproductive approach is also used to record and preserve aspects of culture that otherwise would soon disappear from view (Mead, 1963). When records of this kind are made systematically, they also may be used afterwards to answer research questions that were not envisioned during the data-production process.

Mimetic forms of visual recording of city life are not limited to capturing preexisting aspects of material urban culture or the mere documentation of “naturally occurring” events. They can also involve more experimental set-ups in which respondents are recorded while reacting to unexpected stimuli (e.g., a “strange” object placed in the middle of a square to prompt pedestrian reactions). The choice between still (photographs, drawings) and continuous (film, video) records depends primarily on the nature of the phenomenon under study (material cultural, snapshots, or timeframes versus fleeting phenomena in their

context of cause and effect) and on the information one wants to extract from them (the specific research interest).



Figure 5. (Left) London Neighborhood Watch sign.



Figure 6. (Right) City renewal Dorchester. "Explorative" researcher-produced images of urban communication strategies for informing and disciplining the urban dweller. Photos: L. Pauwels.



Figure 7. (Left) Wall in Brick Lane, London.



Figure 8. (Right) Traffic sign in Brussels. City walls, traffic signs, and run-down structures are an inviting canvas for grassroots communications and gentle activism (the sticker reads "No One Is Illegal"). Photos: L. Pauwels. Urban communication research should not be limited to official sources and voices or to merely intentional forms of communication, but also should capture ephemeral actions and grassroots interventions in the streets.

Exploratory, randomized, and systematic aspects of mimetic visual data production

Visual data production may vary from exploratory and unplanned recordings of events and artifacts, as they are being encountered (e.g., unforeseen demonstrations, riots), to more highly controlled systematic set-ups, based on rigid sampling and/or detailed shooting scripts.

The first phase of visual fieldwork often benefits from an "orientation phase" in which numerous types of existing (visual and nonvisual) data sources (e.g., Google Earth, newspapers, reports) are explored, and researchers start to engage in responsible and ethical rapport-building and occasional image-making. The initial visual exploration of the research site with a camera may involve the pursuit of a particular interest or theme, or it may remain open to whatever captures the attention of the researcher at a given moment. During such visual explorations (e.g., of an urban area in a foreign land), quite unexpected things may happen. Researchers need to be watchful for, or even focused on, particular events or phenomena that cannot be (fully) predicted or planned, let alone sampled. Although exploring an environment in an unplanned way with a camera or through direct observation (and note-taking) may generate interesting first impressions or insights, it provides only a limited and partial view of an area or setting that is almost always more complex and subtle.

To mitigate or minimize bias (preconceptions and predispositions) from the researchers' side, several techniques have been developed to introduce a more "randomized" approach to the data-production process (see also Sorenson & Jablonko, 1975). Such techniques can be useful in avoiding the problem of recording only what seems interesting at first sight (or to counter preconceptions about what it takes to "cover the field" in a somewhat representative way). "Sampling" in visual research may occur before or during the data production. A researcher could, for instance, use a sampling method (probability, selective, or convenience) to select research units that will be studied (e.g., houses or households in a neighborhood) from a database or draw a grid on a map to select the sites that will be photographed. Alternatively, one could decide to record every 10th house in a street or all visible billboards along a predetermined route, or make pictures after a predetermined numbers of steps along the way (e.g., Harper's 10-step approach, 2012).

To ensure that the research units are being treated in a consistent manner during the process of data collection, mimetically oriented visual research often uses "shooting scripts" (Suchar, 1997), which meticulously describe exactly what should be included in the images, from what position, and at what time. This approach may help increase the informational value of the record and ensure a certain formal uniformity among the visual records so that they are able to be compared and processed more easily. Shooting scripts may help bring research choices into the open and are of great benefit to those who actually need to produce the records. However, to a certain extent, this technique is also limited to what is preconceived to be important. Therefore, it is preferable for shooting scripts to be based on an extensive pre-study (cf. "prior ethnography"; Corsaro, 1982).

It is interesting to note that the Surrealists in the 1920s already devised strategies to explore and experience the city in a random or subconscious fashion by using arbitrary techniques to "get lost" in the city (e.g., jump on the third train, get off at the fourth stop, and take the fifth street on the right). Forty

years later, the Situationist Avant Garde also promoted “walking the city” in an unplanned manner to experience the city in another way by using the technique of “drifting” (*dérive*). Yet, as the most prominent theorist of Situationists Guy Debord (1956) contended, such a journey is never completely driven by chance as the environment tends to exert “psychogeographic effects” (through several attractions along the way), which draw people to subconsciously follow certain routes.



Figure 9. (Left) Historic image on a wall in Dorchester.

Figure 10. (Right) Historic photo on a construction fence (London). (Photos: L. Pauwels). These are researcher-produced photographs of “found” images in their urban context. As found images (which probably still exist in another form: negative, paper print, or digital file), they provide information about former appearances of the city and could be used in a “repeat-photography” project to testify to social changes that have occurred between then and now. These broadly framed “meta-pictures” offer information about the current use of these historic images by depicting them in their wider environment. To the passers-by, such historic images may communicate the rich legacy of the city’s past and the efforts of the authorities to preserve it, or the dramatic changes/improvements that have happened or are about to happen. They may also support the claim for tradition and quality of current businesses and institutions.

*Sequential and longitudinal visual data production methods:
“Interval/time-lapse” recordings and “rephotography”*

Time, space, scale, and movement are often essential aspects of visual data production. Significant changes in the flows of cities can transpire in just a few minutes, hours, or days, as well as span several years or even decades (McPhail & Wohlstein, 1982; Zube, 1979). A diachronic study of an urban environment could concentrate on the repetitive patterns of a number of activities and phenomena that occur during a day from the early morning until late in the evening, or it could focus on changes in the urban environment that span much larger periods of time. Therefore, some visual data-production techniques explicitly focus on sequentially researching social change and cultural expressions as they develop, rapidly or gradually, over time in a particular physical or cultural space.

“Interval photography” as a research technique, for instance, essentially involves making a series of images from the same vantage point with a set time span in between, resulting in a sequence of

pictures that documents any visible changes that have occurred in the depicted scene (for an early example, see Rothman, 1964). "Time-lapse photography," then, is a form of interval photography whereby the sequentially produced photographs represent a visual succession within a duration of time, giving the impression of a continuous record (a sort of film in "fast motion" or stop-motion) so that slowly progressing changes or activities spread over many hours become "visible" in a fluid form (e.g., useful to perform a rhythm analysis of the human interactions on a square, a market (Figure 11), or a train station). In a way, interval photography and time-lapse photography are forms of "repeat photography" (Rieger, 2011). Interval photography, however, usually does not involve revisiting the site, "retracing," and reproducing the initial framing and conditions of the scene, as data are being collected at a given (fairly limited) period of time, most often without removing the camera from its fixed (tripod-mounted) position.



Figure 11. Time-lapse photography project on London's Billingsgate Fish Market. Dawn Lyon, faced with the difficulty of apprehending the sensory environment of this market through observation in real time, used time-lapse photography (every hour of activity is presented in 30 seconds) as an analytical tool for researching the elusive quality of a market space and the work that takes place within it. This approach generates insights into temporal and spatial rhythms, patterns, and interconnections of work and consumption, and the ways in which embodied labor, interaction, and mobility produce market space.

Rephotography projects may start from pictures made by the researcher ("prospective studies") or depart from existing pictures ("retrospective studies") that are often produced outside a research context, as they are drawn from archives (Figures 12–13), magazines, family albums, or picture postcards

(Rieger, 2011). Such longitudinal visual research may involve rephotographing sites (e.g., exteriors and interiors: streets, gardens, homes, factories, residential areas); rephotographing events, activities, and processes (changes in rituals, work processes, or activities of a varied nature); and rephotographing people (their changing physical appearances, belongings, and activities). Thus, rephotography projects are not limited to revisiting environments from the same vantage point, but they may, for example, also include the visual documentation of fairs and events in the city, whether or not they take place at the same venue.

Rephotographers must realize that they are working with highly “mediated” aspects of a presumed social reality and that, to some extent, they are revisiting “views” that are tied to initial choices made in the past (e.g., picture postcards of tourist attractions from a particular vantage point). Another challenge for rephotography as a long-term endeavor is that research subjects may disappear or become inaccessible or invisible. Structures may become broken down or hidden from view by a newly erected structure. Events may cease to exist. Participants may die, move away, or refuse to cooperate any further. Sites may have shifted from public to private ownership, or vantage points may be inaccessible because of changes in traffic situations, for example, trees that have grown bigger, and so on.



Figure 12. (Left) Antwerp Southern Docks (undated, first half of 20th century).

Figure 13. (Right) Southern Docks (April 2014; photo: L. Pauwels). Documenting urban change through rephotography. The Southern Docks in Antwerp were completed in 1881 for inland waterway navigation. From a thriving industrial and commercial area focused on expediting goods (mainly coal, stones, sand, and mussels), which required harsh and dangerous labor by men, women, and children, this neighborhood developed from a period of destitution and neglect after the closing down of the harbor activities (1970s and 1980s) to its present status of a highly gentrified neighborhood with museums, art galleries, luxury lofts, restaurants, and cafés. The large hydraulic power plant (“Zuiderpershuis”) in the middle of the photographs now serves as a cultural center, and the lower building left of the power plant, which used to be the docks’ first aid post, now is an atelier for creative writing.

***Participatory Visual Research:
Involving Urban Respondents With and Through Images***

Some methods of “researcher-initiated” visual data production will also involve research subjects in more active ways. This is the case when using visual materials as stimuli (e.g., archive materials of neighborhoods or researcher-produced images of urban phenomena that were produced to address particular issues) in nondirective interviewing situations or when prompting research subjects (e.g., people living in a particular neighborhood, recently migrated people, elderly people or youngsters) to produce their own images with respect to a certain issue (e.g., accessibility of a city, safety, etc.) and asking them to comment on it afterwards. These approaches are often presented under the umbrella of participatory or collaborative visual research techniques (Pauwels, 2015a).

Visual elicitation: Verbal responses to visual stimuli in an interview situation

The technique whereby images are used as a stimulus in the context of an interview is now primarily known as *photo elicitation*, although in fact many types of images may be used (still and moving, paintings or drawings, etc.) and thus *image elicitation* or *visual elicitation* would be a more appropriate term. The visual materials used as “stimuli” to obtain unique kinds of information from respondents and informants may include preexisting “societal imagery” (historic or archive pictures of cities, advertisements, etc.), as well as researcher- or respondent-generated materials (Collier & Collier, 1986; Wagner, 1979).

The confrontation of the interviewee (or multiple respondents in a focus group setting) with (camera) images may yield two distinct forms of data for the researcher. First, the interview-with-visual-materials offers the researcher a fairly simple and quick technique to acquire information about whatever is visible in the image. Knowledgeable respondents can often tell very accurately who or what has or has not been captured by the images (when pertaining to their world), which actions are being performed, and what the significance of certain depicted signs and symbols may be. The purpose of photo or film elicitation (Krebs, 1975) is, however, not restricted to the collection or explanation of a series of concrete “facts” about whatever has been recorded. This technique also allows the material to elicit or trigger deeper, more abstract values, perceptions, and beliefs of respondents, who as individuals are involved in the depicted world (Figures 14–15).

The particular attraction of the visual elicitation method for both researchers and researched can be partly explained by the polysemic character and engaging nature of the stimulus (visuals tend to trigger quite vivid, varied, and unanticipated reactions), as well as by the mitigation or even reversal of the researcher/researched hierarchy whereby respondents are empowered to fulfill the role of “knowledgeable” informants or even experts rather than mere “objects of interrogation” (Collier & Collier, 1986; Pauwels, 2015a).



Figure 14. (Left) Twin Rivers Visual Stimulus #5.

Figure 15. (Right) Twin Rivers Visual Stimulus #13. Jon Wagner used the photo-elicitation approach as part of a larger study about the physical and social features of Twin Rivers (see Keller, 1976), a planned housing development project located about an hour from New York City. The two images belong to a series of 17 photographs, depicting different aspects of the newly “constructed” community. This set of visual stimuli was used “to explore resident perceptions of this community in-the-process-of-becoming” (Wagner, 1979, p. 87). This included both their familiarity with aspects of the prefabricated environment and individual preferences and needs. Wagner (1979) sees photo elicitation as a powerful “vehicle for asking these questions without suggesting response categories” (p. 86).

Respondent-generated image production: “Visual” feedback from the field

The interview using visual stimuli can offer a wide range of relevant information about how respondents perceive their world (as “verbalized” on the basis of visual stimuli), but genuine visual feedback (both mimetic and expressive) may be obtained by inviting members of a group or culture under study to produce their own images in response to a researcher-initiated assignment (e.g., “take five images of what you like most about this neighborhood and five of what you see as problematic,” or “depict your typical day in the city from morning till night”). The underlying premise of this approach is that significant patterns of the respondents’ culture (norms, values, expectations, etc.) can be expressed in the images that respondents make (both in what they depict and how things are depicted) and thus revealed to researchers (and possibly other respondents as visual stimuli (Figures 16–17); for a pioneering study, see Worth & Adair, 1972).

However, the question remains as to what extent one can prevent, even in the teaching of the most elementary techniques for the production of camera images, the cultural outlook (or, in this case, “bias”) of the researcher from affecting or disrupting the outcome of the visual assignment. Also important

to note is the fact that the visual outcome of a respondent-generated imagery project—even when resulting in a complete film or photo series—is not a scientific end product (but primary “data”). Researchers who work with such materials are left with the difficult task of meticulously analyzing such images for both significant content and style, as cultural patterns may reside in both (see also Chalfen, 2011).



Figure 16. (Left) Student Alina Dragan asked respondents suffering from an acquired brain injury to depict crucial aspects of their life. They often expressed their confusion and insecurity when trying to navigate the city through several pictures depicting street signs and people reading maps. Other pictures referred to their need for a quiet and safe environment. Courtesy: A. Dragan.

Figure 17. (Right) Student Nathalie Claessens used the “respondent-generated imagery” approach to investigate what elderly residents of a nursing home valued most in their environment. In particular, she was keen to find out to what extent the views—in terms of needs and facilities—as expressed in scholarly literature, government policies, and regulations, matched those held by the residents. The Virgin Mary Grotto dominates the series of pictures that Aagje (age 93) made. Courtesy: N. Claessens.

Scholarly Options to Visually Communicate Insights About the City

Scholars of different disciplines, including urban sociologists and urban communication researchers, have come to realize that a more visual approach to the study of society should not limit itself to analyzing and producing visual data about the phenomenon under scrutiny. Visual scholarly communication products compose a broad variety of ways to visualize and express insights in novel, more experimental, and experiential ways. They include rich traditions such as social scientific filmmaking and the visual essay approach, as well as emerging communicative phenomena such as digital storytelling, photonovellas, and more arts-based approaches such as exhibitions, performances, and art installations.

The images of a visual essay are often made with this final “communicative” purpose in mind, so that they will be more apt to fulfill their expressive role, both through what they depict (subject matter) and how they depict it (formal traits). The same applies to the practice of scientific filmmaking, which typically conflates the distinction between the production of visual data and the final organization of the material into an audiovisual whole. Neither is a pure end format or a distinct research method.



Figure 18. Picture originally titled “The Urban Panopticon/Los Angeles,” taken from “Street Discourse: A Visual Essay on Urban Signification” (Pauwels, 2009). This photo essay attempts to interrogate and confront the multi-authored communicative spaces of cities through a combination of evocative texts and purposefully made pictures from actual aspects of urban material culture and human behavior. Both the textual and the visual parts of this essay conjure a view on the city as an extremely hybrid semiotic space—a huge, out-of-control combination of interventions made by actors, with different, often conflicting interests. The visual essay implicitly and metaphorically examines these multiple intermeshing discourses—the historic, the political, the social, the communicative, the multicultural, the commercial, the religious, and so forth—which provide the city with its unpredictable, multilayered, and never fully graspable character.

The Visual Essay

Today, the term *visual essay* is used for a variety of formats that have moved far beyond the paper-based pictures and text combinations or linear short movies. They vary in length and breadth from concise articles to book-length contributions, from short clips to full-length films on DVD or the Web, from poster-size compositions to room-filling exhibitions and art installations. In principle, a visual essay may consist of any type of static or moving visual or multimodal representation. It can make use of preexisting images or images explicitly produced for the purpose of either photographic or non-photographic (drawings, paintings, graphics) nature. Boosted by new media technologies and networking opportunities, the visual essay has developed into a contemporary vehicle for voicing and visualizing all sorts of personal reflections, new ideas, arguments, experiences, and observations, thereby taking any possible hybrid variation and combination of a manifesto, critical review, testimony, or just a compelling story.

The major challenge and strength of this scholarly form reside in the skillful production and synergetic combination of visual materials with other signifiers—words, layout, and design—adding up to a scientifically informed statement (Figure 18). The visual essay occupies a particular place in research practice, balancing between art and science, information and expression. Its broad expressive range; its “open-ended,” polysemic, multivocal character; its hybrid multimedia or multimodal and cross-platform appearance; and its largely uncodified nature are simultaneously its greatest challenges and a potential source of controversy (“Is it art or science?”; Pauwels, 2012a).

Film and Multimedia Productions

Besides providing a visual documentation of certain aspects of the reality under study, social scientific filmmaking represents a research approach and a specific form of scientific communication that is directed toward specialists of the discipline or subject matter, aspiring social and cultural scientists, or in some cases a broader public (Figures 19–20). The usefulness of film for (audio)visual data collection—both in observation and in experimentation—is now beyond question, but the form it should take as a scientific product or discourse and the precise rules that should be followed in this respect are still very much up for debate (MacDougall, 2011; Pauwels, 2006). It is important for scientific filmmakers to make their choices on the basis of scientifically informed insights and to use the appropriate expressive devices (editing, framing, sound mixing, voiceover, etc.) without succumbing to the temptation to apply more appealing or expected means of expression (cf. the entertainment industry) in an uncontrolled and unmotivated way (Rouch, 1975; Ruby, 2000).

Film as a medium of representation is exceptionally rich. Compared with types of non-camera-based visual representations, moving images edited into films have a particularly strong mimetic and expressive potential because of their time-based and powerful multimodal character (enabling development over time using sound, image, and text). Current digital media technologies allow for further expansion of the discursive potential of film and make it into ever more hybrid products with more possibilities and challenges. Nonlinear ways of organizing images, texts, and sounds offer numerous possibilities to bypass the often too-rigid flow of moving images and may accommodate their content for various audiences (according to their level of knowledge and specific interests).



Figure 19. (Left) Still from the urban sociological film *Mission Hill and the Miracle of Boston* by Richard Broadman (b&w, 60 min, 1978). This film is "the story of urban renewal, racial conflict, and the struggle of a neighborhood to survive these changing times. Spokespeople include real estate developers, community activists, workers, and residents."(<http://www.der.org/films/mission-hill.html>).

Figure 20. (Right) Still from the film project *A Country Auction: The Paul V. Leitzel Estate Sale* by Bob Aibel, Ben Levin, Chris Musello, Jay Ruby, and Milton Machuca (color, 58/6/47 min, 1983/2012). This exemplary visually expressive and reflexive anthropological film (1983) is about the social, personal, and economic aspects of an auction of the last "general store" in a rural community in Pennsylvania. Twenty-five years after the film's release, the team decided to go back to the town where the auction took place to pick up the story with the people who had been at the sale and to further reflect with the team on the limitations and opportunities of their first film. This resulted in *Reflexive Musings: A Country Auction Study Film* (2012; <http://www.der.org/films/a-country-auction.html>).

Final Thoughts and Observations: Challenges and Emerging Opportunities

Visual methods have gradually gained currency, and their application is not limited to any one discipline or field. They can serve research of urban contexts in many ways; in fact, one should start to think of them as quite obvious rather than unusual ways of gathering data and communicating insights, particularly when looking for more direct data of a holistic nature, when (material) context is important, when past events are only accessible via visual representation, or when field involvement and views of participants are sought. Still, much social research is very indirect in its interrogation of the social world, asking people to tick or fill in predefined answering categories and focusing on what the respondents "say" in a particular situation, not what they actually do or have done in real-life situations.

Through focusing on the visible aspects of its different actors and their impact on the material environment, visual methods and techniques may definitely help disclose the city as a multi-authored communicative space, a hybrid of the planned and unplanned, of cooperative and competing actions, of past and present interventions. Direct urban experiences and mediated ones have become intricately

connected and together “produce” the city and life within the city in radical but as yet hardly documented new ways. The city is replete with screens and media of all sorts (Figure 21). City dwellers and visitors are using personal media while navigating the city, and the city is virtually and visually marketed and reframed by numerous official and private actors with distinct or overlapping political, cultural, or social agendas (Graham, 2004; McQuire, 2008).



Figure 21. Outdoor screen at a recently revamped square in Dorchester. Photo: L. Pauwels. Cities are becoming more explicitly “communicative” through the use of screens and the use of a host of (visual) technologies that “mediate” the urban experience in many ways.

It is interesting to observe that the “communicative city” and the city dwellers’ technologically enhanced ways of experiencing urban space can, to an important degree, be researched by using the same or similar technologies that tend to shape the current heavily mediated city. New mobile visual technologies such as “action cameras” (e.g., the GoPro Hero), “dashboard cameras” (promoted by insurance companies and used by the police), “life-logging” cameras (tiny interval photography devices that can be carried inconspicuously on the body, e.g., the “Narrative Clip”), and “smart glasses” (e.g., Google Glass) allow interesting new ways of data production, in particular, when comprising built-in geolocative capabilities or when synchronized with a separate GPS tracker (Chalfen, 2014; Grady, 2007). Such technologies allow capturing city life in a dynamic and unobtrusive way while at the same time documenting the behavior of the image producers or device carriers (whether researchers or respondents) within that city by tagging their “views” both spatially (where are they looking at what exactly?) and temporally (when and for how long?). Connecting the dynamic information of GPS (e.g., “walking paths” of respondents) to, for instance, the data stored and visualized (spatially “mapped”) in GIS (geographical

information system) or Participatory GIS (another important option to tap into the needs and knowledge of the “users” of the city) would open up a whole series of unique possibilities (e.g., by linking specific patterns of use to specific characteristics of a neighborhood at plot level, and later possibly at different floor levels) for researching the highly mediated and rapidly globalizing urban context.

New challenges and opportunities also reside in the domain of archiving, exchanging, and “sourcing” knowledge. Citizens can be motivated to produce and upload visual data and help researchers annotate these products, although the production of metadata needs to be streamlined and controlled to be useful. Digital collections of images clearly are more versatile than physical ones. The new opportunities of those emerging technologies are vast and as yet hardly explored as a research tool. Virtually undiscussed, too, are their vast ethical consequences (Pauwels, 2008b). Google Glass did generate some discussion in this regard, and similar worries are currently being voiced around the use of drones, in particular, those equipped with cameras, and toward some publicly accessible image resources, but it is clear that neither citizens nor scholars are able to keep pace with the rapidly evolving technologies that actively redefine the urban context.

Although discussing and advocating the many promising prospects of visual methods for the study of urban contexts as complex communicative constellations, it should be noted that they do not provide a shortcut to valuable data and blissful results. Such methods do require the further development of scientifically informed visual competencies among researchers, more explicit and integrated methodologies, and a general attention to maintaining highly reflexive attitudes throughout the process. In addition, there is a high level of lingering confusion regarding how, where, and when images can or should be collected or produced (especially in public or semipublic places) and what uses are possible while still observing the rights and expectations of all parties involved. Performing visual research, therefore, also implies managing the divergent expectations, standards, and understandings of diverse research audiences as well as approving bodies (review boards, peer reviewers, publishers, professionals, consumers/users; see Pauwels, 2015b). The use of the visual as a data source or as a medium for capturing, processing, and expressing social scientific knowledge about (urban) society continues to challenge current scholarship. It generates particular demands, including specific visual competencies and ethical questions, but also unique rewards by creating new opportunities for captivating ways of building and disseminating knowledge. More explicit and transparent methodologies and exemplary visual urban studies may help visual research gradually enter the realm of widely accepted options in the study of urban society and urban communication.

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