

Exploring the use of self-directed photography as a tool in neighbourhood analysis

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Abstract: The use of visuals in geography has had a long-standing tradition. This has included the use of maps, photographic material and other multi-media sources to explain and interpret spatial phenomena on the urban landscapes. However, the gathering of such information has been, for the most part, the domain of those with the technical expertise and equipment. The exception to this has been in such areas as cognitive mapping where participants have been prompted to develop mental representations of the landscape in the form of line maps that represent cognitive images of cities and neighbourhoods as they envision them. This paper explores the use of self-directed photography as an innovative means to solicit images of neighbourhoods as captured through the lenses of cameras, in the hands of the residents themselves. This method not only empowers residents to photograph positive and negative aspects of their neighbourhood, but it also allows them to be in direct control of the experiment and its outcome. This technique has been successfully used in numerous studies of tourist destinations sites. However, it has not been used to any great extent within the neighbourhood setting. The critical objective of this research is to highlight the key attributes of this technique and consider their applicability for use in neighbourhood analysis. Expected data from a preliminary field experiment are reviewed to support this use of this innovative research tool in neighbourhood analysis.

The use of visual graphics in the form of maps, photographs and more recently, computer simulations, have provided geographers with the keen ability to interpret the urban landscape from many vantage points. The use of maps, in the form of land use, historical or bioregional have traditionally been used to display relevant information about a given location. The domain of

producing such maps has primarily been attributed to cartographers and those with the prerequisite skills. Furthermore, the interpretation of the urban landscape has also been for the most part, limited to those who control the images being investigated. In many instances, local residents are involved in the decision making process, and in the final stages, where they are asked to comment on possible solutions to urban development issues. Many times, photographs, maps, and future renditions of projects are displayed and residents are asked to comment on positive and negative aspects of the proposed project or issue. In so much as this method is essential in the process of urban interpretation and project development, it does not give the residents an avenue for direct control of the issue being examined.

The present research attempts to address this shortfall by exploring an innovative method of urban interpretation that empowers residents, and places them at the frontline of tackling and uncovering urban issues. Moreover, it forwards an argument that the use of self-directed photography provides a new urban analysis tool for urban geographers to employ. The method will be explored along side of the traditional measures in order to assess the potentialities of this procedure being incorporated in future urban research.

Perception Indicators

Strauss (1961) delivered a poignant but still a relevant backdrop in his examination of perception studies and the city, by noting, “how difficult it is not to *feel* in some way about cities in general, for cities are such a tremendous phenomenon as to call forth an enormous range of human sentiment and emotion” (Strauss: vii). Feeling about place is a powerful expression that can create a strong or weak sense of place, contributing to people’s emotions to the image they form about a particular area. In thinking about the city in general, many residents hold feelings about certain neighbourhoods— be they the posh neighbourhoods of the wealthy districts, or the neighbourhoods situated on the proverbial “wrong side of the tracks.” This simple thought holds some merit, as the

images and perceptions generated locally do not only impact the local residents but the entire city with respect to what the overall perception a particular neighbourhood is. It is on this level, that it becomes essential to tap into the emotions of the residents to truly understand how they feel about the neighbourhood. However, being able to quantify those feelings is a difficult task that presents important considerations for both the researcher and the residents.

In the salient literature, environmental perception studies are enormous in breadth and focus. It is in this body of literature that researchers have aspired to understand how people feel about places and how the ordinary urban landscape is interpreted by them. Knox (1996) provides a useful breakdown of the two main fields of perception study, describing them as designative and appraisive approaches. The designative approach focuses on people's imagery and mental cognition of the organizational spaces of cities. Here the emphasis is on people's orientation within the urban environment. Appraisive approaches take the view that urban imagery reflects people's feelings about the city and that these feelings in turn impact decision making about the urban environment (Knox: 261). The main difference appears to lie in the understanding of what impact space has on people's perception of place. It should be noted that the purpose of the following section is to briefly explore the history of perception studies and to extract possible methodologies and support for the present research. In order to assess the applicability of self-directed photography it is necessary to incorporate a wide breadth of literature so as to build a sound foundation for future studies.

Measures of Perception: Designative Approaches

The seminal study in the designative approach is considered to be that of Lynch (1961). Lynch's landmark work, entitled *The Image of the City*, transformed perception studies. Lynch focussed on the use of cognitive or mental mapping procedures to produce images of the city and its parts. The method used included extensive interviews along with mapping exercises to solicit mental images from the residents. This was done by having people produce a mental

map from memory that depicted the city from the images they held in their minds. What was produced from this method was a wealth of relevant spatial information about the city and its parts. Lynch found that the maps produced by people included similar themes and components. He cited five critical elements that were essential to understanding the images being produced—paths, edges, districts, nodes, and landmarks. These key features allowed Lynch to create a general mental image of the city as a whole by incorporating multiple images into a single representation. Lynch also attempted to better interpret the image of the city through an analysis of the meaning and legibility of space, striving to comprehend the look and feel of cities and to determine if these qualities were of importance. “The urban landscape, among its many roles, is also something to be seen, to be remembered and to delight in. Giving visual form to the city is a special kind of design problem, and a rather new one at that” (Lynch: 1).

In the final analysis, through mapping and interview techniques, Lynch procured people’s mental representations of the cities and neighbourhoods. From these simple procedures, Lynch assembled a complete image of the area that encompassed the varied cognitive images of the residents into a single representation. This image contained a wealth of information about the perception of place, patterns of movement, interaction and much more. The information was then synthesized into a picture of place that incorporated Lynch’s notion of the ‘whole’.

In discussing the element types, there is a tendency to skim over the interrelations of the parts into a whole. In such a whole, paths would expose and prepare *districts*, and link together the various nodes. The nodes would join and mark off the paths while the edges would bound off districts and the landmarks would indicate cores (Lynch, 1960: 108).

Lynch’s work became the starting point for understanding the image of a city or a neighbourhood. Since the 1960’s, numerous researchers, including Downs and Stea (1973), Spencer (1973), Gould (1974), Tuan (1974), Clark (1977), Pocock and Hudson (1978), Hayes (1980), and Stein and Sutherland (1989), have all used and furthered Lynch’s principles in imagining the city through cognitive mapping.

More recent studies, such those by as Kitchin (1996), Kuo (1998), Peron et al. (1998), Sadalla et al. (1993), Nasar (1994), O'Neill (1991), and Sheets et al. (1991), have also forwarded the designative approach of cognitive mapping by focussing on smaller specific areas of research. However, Kitchin concludes that most mental maps have been weak in terms of reliability and in the ability to incorporate testable hypotheses (Kitchin: 79). Nevertheless, he still considers the use of this method critical in being better able to interpret the ordinary landscape. Whether or not perception can produce testable results remains open for debate, but what is important is that useful qualitative information can be retrieved and used to understand people's feelings and perceptions about the urban environment. Moreover, in many urban projects, it is also imperative, to give people some sense of control over the project being undertaking.

Kuo et al. provide a practical designative approach in a study which examined the role that changes in the landscape had on transforming images of inner city neighbourhoods. The objective of the study was to determine if the incorporation of trees and grass in the neighbourhood had an effect on improving the image of the neighbourhood. The authors argued that the traditional stance that treed areas actually promoted fear in many inner city settings was false. The results supported their claim as sense of safety and preference actually increased when residents were exposed to a variety of landscape simulations. Furthermore, the approach was innovative and intriguing as they relied on computer-simulated photographs to derive from the residents a preference for what type of setting would best suit the area and their needs (Kuo et al.: 29). It should be noted that the study area consisted of an urban public housing complex in Chicago that included 28 16 storey buildings. There were approximately 15,000 residents that lived in the complex which contained two acres of courtyard space per 1,500 residents. The spaces consisted of basic concrete slabs with very limited recreational amenities.

Sheets et al. examined the cognitive impact that vegetation had when added to urban landscape. In his study, Sheets explored the addition of trees along streets through the use of a variety of line drawings that represented different vegetation levels. Again,

residents were asked to evaluate the drawings with respect to whether the trees added an improved perception of the area. The results appear to support the idea that vegetation can have a positive effect on people's feelings about the neighbourhood. The authors also concluded that vegetation scenes were seen as better, safer, and cleaner places to live in (Sheets et al: 301).

In a similar study, Peron et al. focussed on the relationship between cognitive processing and the preference responses to outdoor scenes. The authors used twelve scene types indigenous to Australia, Italy, and the Netherlands, including both rural and urban settings. The goal was to determine preference for scene types, familiarity, and judgements for each scene type by residents of the three countries (Peron et al.: 283).

The main result of the above cited research projects was that perception appeared to be measurable through the use of illustrations and photographs to gauge whether or not an area was positive or negative and whether the impact of simulated features affected overall perception of place. For neighbourhood studies, it appears possible that photographs of different neighbourhood features could be used to gauge a sense of how the residents feel about certain aspects of the area and how this can impact how confident people are about their neighbourhood.

Sadalla et al.; Foley et al.; and Nasar and O'Neill focussed their research more on assessing the perception of the physical components of the city. This was evident in Nasar's study of the evaluative qualities of building exteriors. In this research, the author examined three key aesthetic variables: formal, symbolic, and schemas. Again, the designative approach was used to determine the desirability of different types of exteriors. Nasar concluded that naturalness, upkeep, intensities of use, and style were key factors that determined what an individual will experience when exposed to different types of building styles (Nasar: 389). Directly related to Nasar's work is that of Sadalla et al. (1993), who detailed the impact of building materials on cognition. They attempted to determine the symbolism in building materials used in home construction and the impact it had on perception. The emphasis was on uncovering the cognitive meaning of the landscape through the use of perception measures. More important, Sadalla et al. noted

that there were cultural meanings in material selection and that this could impact social identity (Sadalla et al.: 155). This study incorporated the use of slides to determine a sense of feeling about particular material types and how individuals felt about each.

O'Neill (1991) pondered the idea that there is an architectural legibility in the landscape. This was similar to Lynch's work in the *Image of the City*. However, in this more recent work, O'Neill examined how people produced mental or cognitive maps of the spatial relationships within a building and the ease of way finding within this environment (O'Neill: 259). Although this is a departure from previous works noted, the idea that an examination of the built environment, through cognitive mapping and mental imaging, remains important in that it leads supports to smaller scale studies such as neighbourhoods and the smaller areas within them, such as park areas, community centres, or even spaces along main streets.

Measures of Perception: Appraisive Approaches

The appraisive methods of perception studies include recent works from Mesch et al. (1998), Nasar et al (1995), Woolever (1992), and Weeing et al. (1990) to cite a few. Appraisive studies explore the critical aspects of people's feelings about the environment. Within this context, Mesch provided a key example in his study of local attachment and environmental perception. Mesch and his coauthors sought to understand the determinants of place attachment through two theoretical perspectives: the community of limited liability, and the liberated community. The limited community model argues that local attachment results from the local relationships that develop over time. The liberated community model contends that only a small fraction of the neighbourhood population experiences local attachment, as only a small number of social ties develop locally (Mesch et al.: 504). A fundamental point is that the attachment to place may result from a positive perception of the neighbourhood environment. From this stance, it is assumed that the physical aspect of the neighbourhood may be as important as the social ties that develop within the area.

In a study that attempted to link urban problems with a declining sense of community, Nasar et al. (1995) examined the psychological sense of community in the neighbourhood (Nasar et al.: 178). In this research, the authors described an eleven-item scale to assess the sense of community possessed by the residents. The study examined three suburban neighbourhoods in Columbus, Ohio. They found that there was a higher sense of community in the neighbourhood that exhibited a higher level of mixed uses. They further noted that there was a higher sense of community in the apartment complex that contained a courtyard as opposed to the complex without (Nasar et al.: 179). The implication for the present research is that perception appears to play a significant role in the dynamic nature of the neighbourhood and that there appears to be a strong connection between the resident and built environments as noted in the use of these techniques.

Related to Nasar's work is that of Weeing et al., who attempted to produce a categorization of neighbourhoods that would assess sense of community through a four-type classification system based upon the level of neighbouring and social networks. The authors used indicators such as: measuring the level of interaction in conversation, visiting, and the provision of social support to friends and neighbours. The goal of the research was to determine the level of neighbourhood cohesion that existed. They found that neighbourhoods consisting of mainly multi-storey apartment blocks tended to exhibit a lower sense of community and were less cohesive than the less dense single-family neighbourhoods, which is contradictory to Nasar's findings noted above (Weeing: 27).

The work of Woolever provides the final examination of perception measures. In this research, the author examined the complexities of neighbourhood attachment. What is important about this study is the fact that Woolever examined attachment not only from the traditional perspective of the behaviour of the residents, but she also included the impact that the physical characteristics played in influencing the level of attachment (Woolever: 99). The most relevant conclusion in her work is that, "neighbourhood perceptions and evaluations are better understood by a model that includes more than individual socio-demographic predictors" (Woolever: 112). Furthermore, her research concluded that a

measurement of neighbourhood attachment levels needs to consider both the individual residents as well as neighbourhood characteristics (Woolever: 100).

From the topical study of the role perception plays in the understanding of neighbourhood dynamics, it is evident that not only is the role of the residents central but so is the impact of the physical surroundings. This is the fundamental contention for the present research, which is attempting to demonstrate that neighbourhood analysis would be better understood by a method that explores the human and physical environments of neighbourhoods in order to assess how confident residents are about their neighbourhood. The research outlined so far has also demonstrated that there are many potential methods that could be used in understanding perception, these ranging from the use of cognitive mapping and photographic interpretation to the use of surveys to measure the sense of community and neighbouring. Each method appears to add a new dimension to the two key theoretical perspectives outlined by Knox. More importantly, it is also evident that many studies crossed over the hazed boundary between designative and appraisive measures of perception.

It is assumed that the measurement of the human environment is a complex and equally subjective task that involves the selection of a methodology and the ensuing interpretation of the data collected by the researcher. The use of survey material in the form of a questionnaire can prove to be a useful tool, but supplemental research techniques are important both to balance this material and to widen the scope and impact of the research.

As noted at the outset, the use of photo-interpretation is an example of a supplemental technique that can be employed. Yet, the selection of a particular type of photo-interpretation methodology is also a complex issue. This research endorses a method of photo-documentation called self-directed photography, as a secondary measurement tool of the physical and human environment of the neighbourhood. This measurement will serve to gauge the residents' perceptions and feelings about the neighbourhood and assist in evaluating their confidence about the area. This method also aides in the development of an overall image of the neighbourhood, grounded in a balance between the human

and physical environments. Furthermore, it will provide a strong representation of both the appraisive and designative measures noted above, as the cognition of space and how people's feelings about place impact decision making in the urban environment are evoked through this innovative approach.

Measures of Perception: Self Directed Photography

The use of self-directed photography has become more represented in the geographical literature, including Markwell (2000); Crang (1997); Sternberg (1997); Rose (1996); Aitken and Wingate (1993); Haywood (1990); Larkham (1986); and Foote (1986). In the majority of these studies, research subjects were provided with a camera and asked to photograph pre-determined target areas. For the most part, this research has centred on the use of this technique as a means to interpret tourists' perceptions of various destination sites. In these exercises, participants were asked to photograph positive and negative aspects of chosen tourist destination sites. The purpose was to determine which sites garnered the most attention and why and also to determine areas that evoked negative feelings about the destination site and why. The use of self-directed photography has also been used, with success, to explore residential areas and the images generated by the residents. However, this methodology is the least represented in the literature but offers the greatest potential for urban application.

Markwell (2000) explored the concept of photo-documentation in a study of tourist destination areas. He noted that understanding the importance of place is critical for this type of research, referring to it as an important component of interpretive human geography. Furthermore, he noted that other disciplines have used the photo-documentation techniques with great success and that the use of visual imagery is a vital aspect of geographical research. To this, Markwell wrote this technique "allows the subjective experience of place to be critically uncovered and understood" (Markwell: 91). The technique is also important in understanding the intrinsic attachment that people have to place, and how these relationships

act as a guide for understanding which aspects of a place are most evident in people's cognitive representations of the urban landscape.

It is important to note that Markwell acknowledges that, although self-directed photography has been used with success in other disciplines, "few geographical studies have been carried out using self-directed photography" (Markwell: 92). The reasons for this lack of interest include the high costs and also the difficulty in finding participants. In the end, Markwell concludes that the empowerment given to the participants is a useful and effective means of obtaining a good sample of the intended project. However, he stresses the need to combine this method of data collection with other forms, such as interviews, survey, or personal observation techniques (Markwell 98-97).

In a study of residential areas, Aitken and Wingate (1993) discussed the importance of the use of self-directed photography as a tool to understand the images of places as seen through the eyes of middle-class, homeless and impaired children. As with Markwell, Aitken and Wingate saw the use of this method as a means of empowering residents to produce images of their neighbourhood as they envisioned it. Furthermore, they linked the use of self-directed photography to cognitive mapping and to the work of Lynch, noting that "self-directed photography, then may be viewed as cognitive mapping which serves to reaffirm the *self* by partially apprehending the *real* (Aitken and Wingate:66-67).

Crang (1997) explored the strong relationship between the use of visual interpretation and geography. He concluded that "geographers have shown the centrality of representations of landscape to understanding social geographies" (Crang: 359). Crang also cited the importance of envisioning as a key part of how people interpret and understand the world, writing that "there is here the possibility to employ the ways people normally envision places and use the practice of picturing to relate to them" (Crang: 370). Crang also observed the pitfalls in the use of this method in geography and cautioned that the careful selection of method of interpretation is essential, as the practice of picturing opens up possibilities for looking at the ways images are embedded in time and space and how they play with space and time (Crang: 370). He concludes that "addressing the practices of seeing, in this case

photographic ones, may prove a useful approach, not a panacea” (Crang: 371).

In the discussion thus far, it has been noted that the use of photo-interpretation offers a secondary and supplemental perspective on the use of perception as a measurement tool in the neighbourhood. What is also clear is that the selection of a self-directed method of photo-interpretation may yield some important findings with respect to understanding the importance of place through the eyes and feelings of the residents. However, there are some important considerations for the use of this type of research. First of all, the obvious cost of this method is a central issue, as the majority of studies provided subjects with a disposable camera and then had to absorb the costs for processing the film. This limits the number of subjects, due to the expense of purchasing cameras and processing the results. A second issue related to this shortfall is the selection of a representative sample from a neighbourhood, as it will not be feasible to use a large number of subjects due to the costs. A third limitation of this type of research is the availability of participants willing to engage in this time-consuming exercise. This method should then be considered an essential but a supplementary data source that provides a visual interpretation of the neighbourhood. The method also helps in understanding the importance of place and sense of neighbourhood as seen through the cognitive aspirations of the residents what they perceive to be both strong and weak places and images within their neighbourhoods.

In terms of a defined methodological approach, Haywood (1990) provides some an important framework. In this work, Haywood employed an urban visit assessment methodology. The purpose was to determine which areas of Toronto tourists found to be the most enjoyable and the most distressing during their visit. The author used the disconfirmation model of customer satisfaction as a framework for understanding the feeling being generated. Based on the principles of the model, people were asked to consider the attractiveness and attributes of the city based on the “visitor’s evaluation of the quality of the urban experience” (Haywood: 25). The main objective of the project was to understand the positive and negative aspects of the visit to the city. In terms of some

important considerations for the present research, Haywood notes some important shortcomings of the use of this technique including:

- Some people did not feel comfortable using a camera.
- Some did not feel comfortable taking pictures in certain instances when they did not feel safe.
- The use of amateur photographers means that some of the images may be distorted due to inexperience taking pictures.
- The short period of time for taking the pictures limited the range of pictures that could be taken over a longer period of time.
- Due to the fact the some people had limited time, the photographs came from only major destination sites, or in fact were limited to only one or two places that they visited.
- The amount of time that is involved in overseeing such a project is a hindrance (Haywood: 27-30).

Despite the noted shortfalls, the overall benefit of using this technique seemed to outweigh the negative aspects. In the final analysis, Haywood points out that this technique can serve as a means of involving citizens in the planning and design process. Furthermore, he also notes that self-directed photography can also be used as a means of comparing two areas of the city, or in fact, two cities (Haywood: 29).

It is clear that there is a need to select a methodology to ensure that the use of self-directed photography becomes a tool and not a hindrance to geographical research. Rose (1996) attempted to address this issue by exploring a methodology for the geographical interpretation of visual materials. Rose cited the importance of cognitive interpretation as a central issue in which the human geographer must attempt to decipher a coherent assessment of the intended visual subject area. Therefore, unlike Haywood, the need to select specific areas becomes critical in being able to manage the outcome more efficiently. Furthermore, this structure allows for a more organized survey of the desired site and also the ability to compare the findings of a number of visitors because they are all evaluating the same region of the city. Therefore, if the project is limited to the smaller boundaries of the neighbourhood and

employed with the local residents, the outcome should produce a more detailed account of the area based on a higher knowledge of the geography. This may be a key difference in the use of this technique from those undertaken in tourist areas where the participants have no knowledge of the area or its geography. However, whether this contention proves to bias the participants remains an unanswered question.

Geography of the Proposed Fieldwork Area

For the present research, the proposed field work incorporates the methodologies cited in this chapter. However, a critical departure is grounded in the fact that the urban evaluation will take place on the neighbourhood scale and it will use the neighbourhood residents themselves. This will allow for the evaluation to be conducted by those who know the area's geography, history and its potential strengths and weaknesses.

The neighbourhood that will be evaluated using this framework is Riverview, which is a medium density neighbourhood consisting mostly of single family homes that range in age from new - 100 years old. The neighbourhood contains 1780 dwelling units, of which 70% are single family and 68% are owned-occupied. In terms of period of construction, 47% were built pre-1946 while 85% of homes were constructed prior to 1960. Predominately, the neighbourhood's housing stock is considered to be in good condition with some homes having undergone extensive renovations and upgrading. There are also pockets of homes in the neighbourhood that are considered to be in need on minor repairs (32%) and homes that are in need of major repair make up 14% of the housing stock (Statistics Canada: 1996).

In terms of neighbourhood amenities, Riverview contains extensive green space and a well-developed park system. The overall spatial organization of the neighbourhood was highly influenced by the concept of the Neighbourhood Unit which was advanced by Perry. This is evident in the location of schools and parks in the neighbourhood. One of the most important features of the area is that fact that it is relatively isolated from other sections of Winnipeg.

This is the result of the fact that Riverview is bounded by the Red River and Osborne street. These two features effectively cutoff this neighbourhood and provide an isolated test area.

It is anticipated that the majority of positive confidence markers in the neighbourhood will be derived from such aspects as the distinctive character of housing, the numerous parks, and the thick canopy of elm trees that envelop the majority of the residential streets during the summer months. Another key feature is the river walk system that has created an extensive and scenic walkway that encircles the neighbourhood, connecting it with the downtown region of the city. In terms of some of the possible sources of negative images, there are pockets of housing that are quite dilapidated in the neighbourhood. Also, some of the commercial area is experiencing a transition and there are high levels of vacant storefronts. There are also higher than average traffic volumes on Osborne Street as the area is a major thoroughfare to the suburban neighbourhoods of south Winnipeg.

Major development in the area is the Riverview Health Centre, which is a major hospital complex that occupies a large section of the neighbourhood. Over the last few years, the previous hospital buildings dating back nearly 100 years were torn down. The ensuing reconstruction project may have caused some residents to consider this area as negative due to the high traffic and noise from construction.

Summary

This paper has attempted to address some of the pertinent issues with respect to the selection of a methodology that will provide an innovative measure of the perceptions and neighbourhood confidence levels of neighbourhood residents. As noted, there are both positive and negative aspects of selecting self-directed photography to accomplish this task. However, it is hoped that this technique will prove to be a rich source of textured data that will provide a glimpse into the thoughts and feeling of the neighbourhood residents. It is on this cognitive level, that the true images of the neighbourhood will surface in colour and detail which are not

attainable in the blue ink of survey forms, or in the voices of opposition at community meetings. In the end, it is hoped that through the lens of the camera, the residents will be able to focus their actions and reactions to complexity of the urban landscape of their territory, ultimately expressing a sense of true territoriality.

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