Walking & Talking: Probing the Urban Lived Experience

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Abstract

With ubiquitous mobile computing devices spreading throughout the urban environment of everyday life, there is a growing need to better understand person-place relationships and how technology can play a role in this urban experience. To this end, we propose a mobile methodology called "walking & talking", an observed walking tour with participants through the city, which is in-situ, makes it easy and motivating for participants to participate and open up. In a case study, this method elicited rich, intimate data, making it a useful research tool for the fields of urban interaction design, mobile and location aware technology and urban planning.

Author Keywords

Mobile methodology; walking interview; place attachment; place meaning; person-place relationship; urban interaction design.

ACM Classification Keywords

H.5.1. Evaluation/Methodology; H5.2 User Interface H.5.m: Human Factors; Measurement

Introduction

As people go about their everyday lives, they create personally meaningful relationships with public places in the city. In the social sciences research has been done

into various person-place related concepts like place attachment (i.e. multidimensional concept that characterizes the emotional relationship between individuals and their important places [1] and place meaning which develops from people's in-place experiences and characterizes the person-place relationship [2].

Within computer science and HCI, the person-place relationship has gained much interest over recent decades. With the vision of ubiquitous computing becoming increasingly realized, multiple computational devices are embedded throughout the urban environment. Urban interaction design investigates how this new technological layer that is being added to the already existing infrastructure of the city can change the way people individually view, shape, perceive, interact with and experience the urban environment. For example the Urban Tapestries-study [3, 4] explored the potential costs and benefits of public authoring, that is, mapping and publically sharing of local knowledge, memories, stories, sensed information and experiences. Using an evaluative map technique, a map of London was annotated with post-its containing people's personal stories related to a place, which informed the design of a mobile application allowing people to digitally annotate and share a personally meaningful map of their city.

Paulos & Goodman [5] investigated people's relationship with familiar strangers and the influence of familiarity of places and strangers on people's feelings of anxiety and comfort in their everyday public places. This inspired the design of a mobile device that could identify a person's familiarity with their current place and the people around them.

The Emotional Cartography study [6] investigated people's emotional relationship with places in the city by letting participants walk freely trough the city while their arousal levels were being measured. Afterwards participants were asked to interpret the arousal levels with the researchers, revealing personal stories and emotions related to places encountered during their walk, creating an "emotion map" of the city.

These studies indicate that a new technological layer of ubiquitous, mobile computing devices can augment our experience of the urban environment. While location-based smart phone services are becoming increasingly commonplace, our understanding of the triangular relationship between relationship between people, place and technology in the urban environment is still underdeveloped. The purpose of this paper is to explore and evaluate a mobile qualitative data gathering methodology we call "walking & talking", a research tool that allows the elicitation of contextualised, rich, and intimate data, specifically suited for urban interaction design.

In social studies, methods for qualitative research into person-place relationships typically use evaluative map techniques [3, 4] or in-depth interviews [2], or both, possibly in combination with pictures of places. Evaluative map techniques allow people to, at high level, indicate which places in the city are important to them, for example by using the number of tokens to indicate the degree of personal significance of the place. If evaluative map techniques are accompanied by an interview, it allows people to elaborate more on their personal significant relationship with places. However, limitations of these approaches are that they all provide a high-level experience of the city, the

participants are asked to recollect or imagine how places make them feel and the distribution of roles between the researcher and participant can make it difficult for participants to open up regarding personal stories and emotions related to a place because the participant can feel like being "examined" by the researcher.

In order to obtain a more fine-grained level of the personal experience of place, walked interviews appear to be a better option than sedentary interviews or evaluative map techniques and can be used for gathering particularly rich data [7]. A major advantage of using walking interviews over sedentary interviews is their capacity to access people's attitudes and knowledge about the environment they are in and generate more place-specific data [8]. Walking is considered to be a more intimate way to engage with the landscape and offers insights into both the place as the self. A spectrum of approaches exist in walking interviews, ranging from participant being the one familiar with the area and determining the route to the researcher being the person familiar with the area and determining the route.

Approaches employed by Paulos & Goodman [5] and Nold [6] acknowledge the importance of being in-situ in order to provide a more fine-grained experience of the city and allow cues from the environment to trigger the memory of participants and allows them to add their own personally significant places that they encounter along the route. However, in the study by Paulos & Goodman [5] the walking route and places to be visited are predetermined by the researcher and are the same for all participants, meaning that areas and places of interest that might not be taken into account. Nold [6]

acknowledged the importance of letting people walk freely around the urban environment, allowing them to visit the personally most significant areas and places in the city, which also makes the walking tour a more engaging for the participants. Although the method did not rely on what people imagine they feel at a place, a limitation of this technique is that the arousal levels are not actual emotions, but in hindsight are being interpreted or transformed into emotions by the participant in discussion with the researcher.

From the advantages and limitations of the reviewed methods emerges the need for a new method that offers a fine-grained experience of the city and allow participants to move freely around the urban environment to ensure optimal use of environmental cues. The method should make it motivating and easy for participants to in real-time, in-place share with the researcher emotions and in-place experiences related to that place and therefore move away from the traditional distribution of roles where the researcher is in the role of "invading" the participant's environment to "examine" the participant.

Designing the "Walking & Talking" Method
The "walking & talking" method aims to probe the relationship between people and place, specifically the personal relationship between a person and their personally significant places in the urban environment. It is a walking tour through the urban environment with a participant and an observer. It is proposed that this method helps participants in opening up regarding personal in-place experiences related to a place, has a low threshold for participating, builds up rapport quickly and easily and treats the participant as an equal conversation partner to the researcher. Furthermore, it

allows the in-situ relating of emotions and in-place experiences to those actual places leading to richer descriptions.

The walking tour with an observer was inspired by the research done by Paulos & Goodman [5] and Nold [6]. A distinction with the study by Paulos & Goomdan [5] was that the walking route in this study was based on the participant's own typical walking routes that are a part of the their everyday rituals and life. This enabled the participants to encounter places along their own typical everyday walking route that might be personal significant places.

Being in-situ in also allows the actual act of approaching, being in and leaving their own personally significant places encompasses the full extent of the experience of that place, similar to Benford's concept of trajectory [9]. It includes a warm-up, in-place experience and a cooling down, and participants during the walk actually reported anticipating/looking forward to reaching their personally significant place and would reflect on their in-place experience when physically leaving the place.

This full extent of the in-situ experience of a place is designed to work as a catalyst, providing participants with cues from the environment which can prompt memories, stories related to the place, emotions and tiny specific details that that would be very difficult to recall by just imagining being in their significant place but in fact made a significant contribution to the experience in that place, like the smell of a specific flower, weather conditions etc. It thus helps participants to relive or recreate the in-place experience that makes a place personally meaningful to them and

leads to a richer description of the in-place experience which can immediately be shared with the researcher.

In addition, the method of walking & talking allows the in-situ identification of actual emotions related to a personally significant place. In this case study, the Plutchik Emotion Wheel (see Figure 1) was used as a tool to measure a participant's different emotions and emotion intensities. This visual tool containing the eight basic primary bipolar human emotions allowed in-place identification of their actual emotions while they were experiencing them, leading to a more accurate identification of the exact emotions experienced in place rather than collecting indications of arousal levels that had to be interpreted by the participants after the walking tour as done by Nold [6].

Walking to one's personally significant places in the city was designed to be helpful in a different aspect as well. The city and a participant's personally significant places in particular would work as an external stimulus in the process of triangulation. Whyte's concept of triangulation is defined as the process by which some external stimulus provides a linkage between people and prompts strangers to talk [11]. The city itself would act as an external stimulus and allow a more natural form of spontaneous conversation between the participant and the researcher, leading away from the idea or feeling that the participant is being "interrogated" by the researcher.

The physical act of walking itself helps as well in discussing personal, emotional experiences or stories related to a place, in the sense that it provides the opportunity for thinking and reflection. When discussing which places people found meaningful in their life,

Manzo [2] found that participants mentioned the importance of movement as a way of thinking and reflecting. Watching the scenery pass by while walking through the city allows a person to get lost in their thoughts and to have a moment of privacy to think and reflect. Also participants report that the physical act of walking itself makes the "mental wheels" of the brain turn and provides them with a relaxing experience. The physical act of walking thus helps participants relax, think and reflect [2]. The fact that people already go for walks to relax and to think and reflect as identified by Manzo [2] means the research method of "walking and talking" is tailored to activities in the urban environment that people already engage in. People can simply talk about their in-place experiences and related emotions with the researcher while walking through the actual city.

Application of "Walking & Talking"-method
In this section a case study will be described in which the "walking & talking" method has been applied. This case study which was conducted in Edinburgh, United Kingdom, explored how people experience the city at an individual level, by investigating people's relationship with their own personally significant places in the city. The aim of the case study was to identify how people's personal connection with their own significant places in the city could inform the design of new technological devices and services that can change the way people interact with and experience the city at an individual and how people will capture and share their personal connection with their own personally significant places with other people.

The design of this study was two-phased. The first phase consisted of an interview including an evaluative map technique during which a person's general relationship with the city was identified, for example which part of the city a participant was most familiar with and where their home and work place where located. We will focus however on the second phase of the research, during which the "walking & talking" method was used to elicit people's in-place experiences and emotions related to their own personally significant places and how they would like to capture and share their personal connection to each of those places.

Walking tour: Based on participant's everyday rituals and habits
Prior to starting the walking tour, in collaboration with the participant their personally significant places that would be visited were picked based on their importance to the participant and the ability to walk to those places from the location of the interview within reasonable time. Participants were encouraged before (and during) the observed walking tour to add new personally significant places to the list during the walking tour with the observer. In addition, the walking tour allowed the researcher to observe to some extent what people are actually doing while walking through the city and more specifically, how they use their personal technological devices & services in the urban environment, for example their smart phone or music player.

Measuring emotions during the walking tour
Inspired by the research method used by Nold [6], during the walking tour, the participants' emotions were measured by having participants indicate their experienced emotions on the Plutchik Emotion Wheel [10]. At the beginning of the walking tour, the basics of the emotion wheel were explained and the participants were asked to put a number on the emotion wheel next
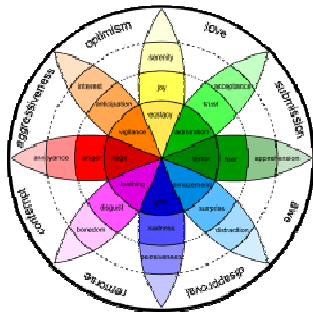
Figure 1. Plutchik Emotion Wheel [10].

Carmen (female, 24 years old, Spanish, Spanish teacher):

"Every time I walk on the bridge now I cannot help smiling. I always stop on the bridge and try to stay there as much time as I can and try to spot couples, people who are in love. I want to be them! I often come back here on purpose even if it is not on my route, because being here makes me feel loved again. [..] I always want to go there when I am in the neighbourhood and I try to stay on the bridge as long as I can."

Figure 2. Indicating emotions related to a place on the Plutchik Emotion Wheel.

to the emotions that they felt at a specific place. However, participants were informed that they were allowed to describe emotions in their own words.

The participants were instructed to verbally alert the researcher as soon as an emotion occurred at any point during the observed walking tour and to indicate the experienced emotions on the emotion wheel by marking the emotions with the number id related to the place (see Figure 2). Participants were asked to elaborate why this emotion occurred, that is, how it was related to their in-place experience, revealing their connection to that place and what that place meant to them in terms of their experience of the city. Subsequently participants were asked if and how they would like to capture and share their personal connection to the place. The observed walking tour ended when the significant places that the participants wanted to visit had all been visited.

Evaluation "walking & talking" Method
This section will discuss the comparative advantages of the method that emerged while conducting the case study as well as the costs of using the method.

Richer descriptions of in-place experiences & emotions
The "walking & talking" method provided a more fine-grained view of the city compared to evaluative map techniques as used in the first phase or the research, because people were actually visiting their own significant places by walking their typical everyday walking routes. Being in situ-in the everyday urban environment and walking along their typical walking routes worked as a catalyst, with cues from the environment prompting memories, specific stories and details from participants' in-place experiences that would have been very difficult to recall by just imagining being in their significant place, but in fact made a significant contribution to the experience in that place, for example the smell of a specific flower, weather conditions etc. In addition, it helped people remembering special events that took place there and other people that had played a significant role in their connection to and experience of a place.

This was illustrated for example for by a participant who during the first phase of the interview had indicated that a specific bridge (indicated by the lips in Figure 3) was important to her because her partner at the time had always referred to it as "their bridge". Although this indicated why the bridge had initially become important to her, actually visiting the bridge and encountering a couple kissing on the bridge made clear the full extent of her current personal connection with the bridge. This quote illustrates one of the main findings of the study that people as a sort of self-

Pierce (male, 20 years old, Scottish, art student):

"I like the general strangeness of this place at night time. Although the place itself looks detached or sterile, I have a strong closeness to it. I was in a dark place at the time, spent too much money, drank too much for six months and hit rock bottom. I didn't even have money for food. I could only find comfort in the darkness. I was disoriented, broken, couldn't get a grasp on anything. I wasn't able to deal with things. I liked the industrial structure, the controlled environment of this place. It provided me with an anchor from going ape shit. Being there at that point in my life made me feel safe and secure, I came back to reality. I have only been there once, but it made me realize I had to make some serious changes in my life otherwise I was not going to make it. Literally not going to survive. It was an intimate experience, it made me feel things again."

therapy actively regulate the way they feel by going for walks to (re)visit places that change the way the feel in a positive way.
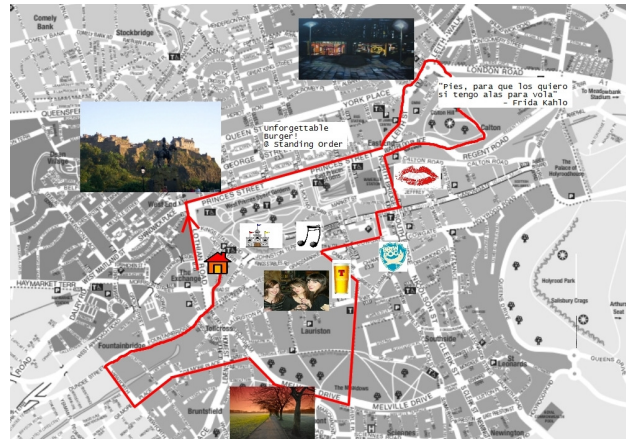

Figure 3. Map with walking route & tags used by participants to capture in-place experiences at those locations in the city.

Because the "walking & talking" method includes visiting people's personally significant places, it allowed people to actually experience how a place makes them feel or to some degree made them feel during the in-place experience. This led to people being more precise in describing their emotions related to their significant places and some participants actually became quite emotional while doing so. Using the interview and evaluative map technique in the first phase of the research, participant "Carmen" related the emotions "flirty" and "happy" to the bridge, but during the "walking & talking" in the second phase she additionally identified feelings of nostalgia, joy and alertness and love.

Helps participants relax and open up regarding personal topics & emotions:
The relaxing physical act of walking together and the urban environment itself, including the participant's personally significant places, drew the attention away from the fact that the participant was being interviewed about personally significant places which in some cases had very personal stories and strong emotions related to it, making some participants quite emotional like art student Pierce when revisiting the shopping centre indicated by the dark painting on the map in Figure 3. The act of "walking & talking" made it easier for participants to open up and talk into more detail about their personal in-place experiences and the related emotions. Participant Pierce for example did not open up regarding his strong personal connection with the shopping centre until we started walking away from it because of the strong negative emotions related to it.

Participating is an engaging experience
An additional benefit of the "walking & talking" method that played an important role in the success of the method was that participants genuinely enjoyed participating because the method offered an engaging experience. The fact of being outside and having a task to do made it a more enjoyable experience as compared to the traditional interview setting, as described by Jordi.

More importantly however was that many participants indicated that they really enjoyed showing their personally significant places and "their city" to someone else and telling their personal stories related to those places to someone who showed a genuine interest in their life in the city and their personal stories attached to a place, as reported by Francois.

Jordi (male, 33 years old, Italian, hotel receptionist):

"I was expecting a boring questionnaire were I just had to give some answers, but it is really nice to be outside and walk through the city and actually be doing something."

Francois (male, 22 years old, French, works in hospitality):

"It was really fun to show you around my important places in the city. It is actually very nice experience to have someone interested in what my life in Edinburgh actually looks like and what the city means to me. Edinburgh means much more to me than just the castle and the Royal Mile (i.e. two iconic landmarks in Edinburgh that are very popular among tourists). I mean, my friends want to see the places I just showed you when they visit, but most people, especially tourists, do not want to see that, they just come here for the castle, but Edinburgh is so much more than that. At least to me it is."

The level of enjoyment experienced by the participants was evident as they were motivated to show all their significant places even if that meant the observed walking tour would take more time than intended. They enjoyed it so much that they really took their time to show the places. Although the walking tour was estimated to take about thirty minutes, participants often took more time to be able to show all their significant places, which could lead up to walking tours of twice or triple or even four times the estimated time. This was more rule than exception.

Low threshold to participate
In general, participants genuinely considered participating to be a fun and engaging experience, which was reflected by the positive effect on participant recruitment. After a few interviews and walking tours, participants had told family and friends about the research and their positive experience of participating, leading to people taking initiative and actively starting to approach the researcher themselves, asking if they could participate as well. This solved the initial recruitment problems and continued to the point that more people wanted to participate than could be handled.

Advantages of "walking & talking" method
When comparing the method of "walking & talking" to other already existing research methods, it can be concluded that the "walking & talking" method provides richer and more precise descriptions of in-place experiences and emotions related to a place by being in-situ. It makes better use of environmental cues compared to evaluative map techniques or interviews with pictures, because it does not rely on participants' imagination regarding how a place makes them feel,

but actually being at the place enables them to relive or recreate the in-place experience that makes a place personally meaningful to them while being in the place. This leads to a richer description of the in-place experience, which immediately and easily can be shared with the researcher. The "walking & talking" method allowed participants to pick their own significant places and walk through the city based on their own everyday walking routes, thus using places and walking routes that actually on a personal level matter to the participant and thus provide more useful environmental cues. This also makes the "walking & talking" method more engaging for the participants since they can show and talk to the researcher about their own significant places that matter to them in their personal lives, which lowers the threshold to get people to participate as well. The fact that the participant can immediately share the information with the researcher and that no extra meeting with the researcher was required meant the method required less investment of time on the part of the participant, which also lowers the threshold to participate. More importantly however is that the face-to-face sharing of in-place experiences and emotions with the researcher makes it more engaging for people to participate and helps people in opening up and recreating or reliving experiences that made a place personally meaningful to them, leading to richer and more precise descriptions of in-place experiences and emotions.

Compared to other methods that use contextual cues like contextual inquiries, which are typically accompanied by focus groups and/or interviews, the "walking & talking" method not only requires less time but is also more engaging, more relaxing and makes it easier for participants to open up regarding personal

topics, because it moves away from the distribution of roles where the researcher is the expert who "examines" the participant.

The success of the "walking & talking" method used in the case study as a data gathering technique to investigate people's personal (emotional) connection to personally significant places in the city, indicates that we should rethink the role of the researcher as the expert who "examines" the participant. This method shows that moving towards a distribution of roles where the researcher and participant are equal conversation partners can be more beneficial for as well the participant as the researcher, leading to richer and more detailed descriptions of people's personal relationship with (a place in) the city.

Costs of using the "walking & talking" method
All these advantages of the "walking & talking" method however come with a price. Initially it had been estimated that the "walking & talking" would take about thirty minutes per participant. But because participants enjoyed participating and were motivated to show all their significant places, the observed walking tour in general took between one and two hours, which although it is a relaxing experience for the participant, is actually an intensive for the researcher who has to keep the conversation and interview going, record responses and walk in an urban environment all at the same time.

Using the method leads to large volumes of rich data, which makes data reduction and data analysis a daunting task. Because it is very difficult to make notes of the participant's responses while walking and talking, the main way of recording the data is by using an audio recording. This implies that the first the audio data has to be transcribed and those transcriptions subsequently have to be analyzed, which requires a lot of time and effort. Because of the richness of the data, it is advisable to use a data analysis method that uncovers themes in the data. However, in return for the time and effort needed to analyze the data, the method provides rich and detailed descriptions of people's personal relationships with places in the urban environment.

Conclusion

The new designed research method of "walking & talking" enables participants to quickly and easily open up in order to uncover personal stories and emotions related to a personally significant place, and makes it easy and motivating to share those emotions and stories in real-time and in-place with the researcher. The "walking & talking" method achieves this by offering a relaxed experience for the participants. This is achieved by using the city and the activity of indicating emotions on the emotion wheel as an intermediate conversation piece around which personal topics and emotions can be discussed, by using the relaxing physical activity of walking through the city together, and by treating the participants as equal conversation partners. The successful application of the "walking & talking" method discussed in this paper suggests that we should rethink the traditional distribution of roles between the researcher and participants where the researcher is the expert who "examines" the participant. A distribution of roles where the researcher and the participant are equal conversation partners can be more successful in eliciting rich and personal, intimate data regarding participant's personal relationship with places in the city.

In addition, the "walking & talking" method is engaging for participants, has a low threshold for participating, and enables the use of contextual cues by placing the participant and researcher in-situ. By doing so, the method enables the in-place relating of emotions and in-place experiences to personally significant places and in real-time, in-place and in person sharing of personal in-place experiences and emotions related to a place with the researcher. This allows participants to relive and recreate the in-place experiences and emotions, leading to more accurate and rich, intimate descriptions of their personal experience of the urban environment.

The "walking & talking" method we propose thus reveals rich and intimate personal stories and emotions related to a place and in doing so can uncover potential for new mobile apps and location aware computing based on people's personal experience of the city and how people can capture and share those experiences. These urban lived experiences of citizens of their own neighbourhood and city can also be beneficial for architects and urban planners in the design of future urban spaces and for the maintenance of current places in the city. This makes the "walking & talking" method a useful research tool for the fields of urban interaction design, mobile and location aware technology and urban planning.

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