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Place mapping with teenagers: locating their territories and documenting their experience of the public realm¹

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Abstract: The purpose of this paper is to present, analyse and critique a research method, 'place mapping', used to document and understand teenagers' experience, use and perception of public spaces. Researchers in two case study sites, Edinburgh, Scotland, and Sacramento, CA, employed conventional street maps as a basis for eliciting and recording young people's spatial experiences. This method offers an effective mechanism for generating and structuring discussion – through dialogue – by the participants about their dynamic and shared experience of place, geographically recording places and ensuring equitable participation.

Keywords: adolescents; research methods; place mapping; urban; public space

Introduction

In the last decade or so, studies have shown evidence that, while urban environments are often frequented by teens, teenagers as a group are excluded from or, not welcomed in, much of the public realm (Owens 2001, p. 35). A growing literature on adolescent studies shows that young people are seemingly invisible from public space in the UK and USA, provided only with token spaces, often inappropriate to their needs and aspirations (White 1993, Matthews 1995, Matthews et al. 1998), and often purposely designed out of public places (Owens 2001). A number of researchers and policy-makers have suggested that, in order to facilitate the integration of young people as users into large-scale and public places, the environment needs to be investigated from the young persons' viewpoint (e.g. Hart 1979, Matthews 1995, Malone and Husluck 1998, Percy-Smith 1998, Chawla 2002, CABA Space 2004, Scottish Executive 2005, Worpole 2005, Clark and Uzzell 2006). In this context, research on teenagers has expanded during the last few years but development of methodological approaches for identifying this youth perspective is still limited (Travlou 2003). The purpose of this paper is to present, analyse and critique a research method, 'place mapping', used to document and understand teenagers' use and perception of public places, by which we mean places away from the home environment, in public ownership or accessible as part of the public realm. Place mapping, as utilized in our research and examined in this paper, is a technique used to locate places that play a significant role for youth, both positively and negatively, and to provide a common point for discussion among a group of teenagers. The method offers the researcher a map and recorded conversations of young people's spatial experiences with regard to the dialectics of inclusion and exclusion from public space.

The original contribution of this paper, however, lies in the shared aspect of this method. Place mapping was used in two case studies – one in Edinburgh (Scotland) and the other one in Sacramento, CA – to investigate how teenagers engage with public space in the

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urban environment across various types of communities. The overall aim of this cross-continental study is to identify the ways in which teenagers (12–17 year olds) perceive the built and physical environment in relation to their real use of different places and explore the symbolic significance this use has for them in a cross-cultural context of geographically disparate communities. The emphasis is on the way in which young people influence and form their own 'microgeographies' (Matthews et al.1998) within small groups and how this manifests itself in terms of their environmental behaviour. The mapping produced through this method portrays how teenagers come into contact with a range of everyday places beyond their home. For each of them, 'the sum of this relationship constitutes a microgeography which, when grouped together, provides a spatio-temporal map of experience' (Matthews et al. 1998, p. 193).

In addition, we discuss how researchers can use place mapping in focus group discussions to foster more active engagement by young participants. The mapping exercise can encourage students to engage in a more creative way, and feel in control of the interview process; this paper illustrates both the advantages and limitations of the method in practice. So far, studies using mapping methodologies (i.e. cognitive mapping) have failed to provide a map of teenagers' everyday microgeographies based on their shared spatial experience. Cognitive maps are mainly depictions of individual experiences of the local environment (e.g. Moore 1986, Catling 1988, de Koning and Martin 1996), whereas what we propose in this paper is the use of place maps as visual representations of a group experience, for a population very much focused on their social peers, i.e. teenagers.

This paper is based on research developed as part of an international collaboration between researchers at three universities: one in Scotland (Edinburgh College of Art) and two in the United States (University of California, Davis and Cornell University, New York State). The project was initiated as a result of a 'Children, Youth and Environment' workshop meeting of the Environmental Design Research Association (EDRA) at which it was agreed that there was a need to understand better how teenagers relate to, and use, the urban outdoor environment.

The main focus of this investigation is teenagers and public places; it explores teenagers' perception of public space that they like and dislike and the meanings behind these perceptions.

There is a desire to explore, from the teenagers' perspective, how space is appropriated and what kinds of environments are perceived as welcoming, attractive or hostile. Part of our aim is to look at whether the kind of experience and types of use of the built environment are shared (or not) between different teenage groups in a cross-continental comparison. Multiple locations have been used for the case studies and a number of focus groups were carried out in each location. These locations were chosen as diverse examples of urban environments; each of the researchers had already carried out a number of research projects there and had developed an understanding of the public realm and its use by different stakeholders, including young people.

Initial, pilot studies were carried by all three universities, to address the common aim outlined above. In the course of these pilot studies, a range of methodologies were tried and refined by each researcher, one of which is reported here. The preliminary results offer exciting glimpses of common patterns of teenage behaviour, spatial experience and exclusion. The pilot studies offered us the opportunity to define common research methods protocols, share analytical techniques and compare results as part of developing a full-scale comparative research project.

Initial focus groups were used to explore themes relevant to our research questions and objectives. This process led to the realisation that we needed to have a more in-depth

understanding of the places young people described places (and the reasons why) as favourite or least favourite places. We decided to use place mapping as a way to gain a more in-depth exploration of all those places that young people refer to during the focus group discussions. Place mapping helped us get a cartographic narrative on teen places within the urban environment – places teenagers like and dislike, places that they choose or avoid. The strength of this paper lies in its empirical and comparative approach, where place mapping was tried and tested in two locations, one in Edinburgh, UK and one in Sacramento, USA.

Place mapping as a youth-specific methodology

Although young people's experiences and perceptions of public space constitute a common theme in environmental psychology literature (e.g. Kaplan and Kaplan 1978, Chawla 2002), landscape design and environmental planning (e.g. Lynch 1977, Moore 1986, Owens 1988a, 1988b, 1993, 1994a, 1994b, Woolley et al. 1999a, 1999b) and children's geography (e.g. Hart 1979, Matthews 1992, 1995, Valentine 1996a, 1996b, Skelton and Valentine 1998, Holloway and Valentine 2000), there is not much written on methodology designed and used specifically with adolescents. Most methodology literature tends either to focus on methods with younger children but not teenagers, or use of identical methods for both age groups. This is not to suggest that research methods developed for adolescents have been absent from the above disciplines, but that such methods are not visible as a distinct focus in the literature. In this paper, we will show how place mapping can be used with teenagers from different backgrounds to create a youth-specific methodology that foregrounds the shared element of teenagers' experience of public space. Although, this method has been used in other studies, we are not aware of any paper that explores its values, benefits and possible obstacles for use with teenagers. Our intention is to offer an empirically based critique of this method and to share with other researchers the pros and cons of using it.

Maps in research with children and youth

In research with children and youth, various mapping techniques have been used to access information otherwise difficult to obtain. Particularly when research is concerned with children's environmental perception, maps have proved to be a very useful tool. An examination of the existing literature on childhood and youth research involving mapping shows that most of these studies used cognitive mapping techniques to obtain information about the young participants' world, where the product is a map or drawing depicting a representation of each individual's perception of their surrounding environment. Kevin Lynch (1977) in his seminal work *Growing Up In Cities* employed, among other methods with children, map drawing activities where his young participants drew the areas where they lived. Similarly, Robin Moore (1986, p. 32) asked children to draw all their favourite places in their neighbourhood to construct what he called 'turf maps'.

However, cognitive mapping in the form of drawing and map making does not show in full spectrum the maker's spatial relationship with his/her surrounding world. Drawing and map making create a very selective (birds-eye view) of the individual's surrounding environment, leaving out a lot of possibly useful information (Downs and Stea 1977). The information in the research cited would typically include the person's most valued places in the form of symbols (i.e. home, school, playground, routes taken from home to school, etc.) or very memorable and recognisable landmarks (Downs and Stea 1973). For Roger Hart (1997), one of the major problems with drawing – including map making – as a method is the fact that children tend to draw stereotypical images of places as emphasised by a particular society. A possible consequence of this is that information about intervening places and their context may not be depicted on their drawings. Additionally, as this method is mostly dependent on an individual's ability to draw, the results may also be affected by the different levels of children's drawing competence. Some maps may be more detailed than others due to different drawing skills (Blaut and Stea 1974). In general, for the reasons outlined above, sketch maps are difficult to interpret.

In addition, the older children become, the more self-conscious they are of their skills. Some young people may feel intimidated by a map making group activity, feeling that they would have to prove their drawing skills in front of the entire class. Map reading, on the other hand, is generally an easier task which does not require advanced skills from participants so long as they are familiar with maps (Catling 1996, Umek 2003). Different studies on cognitive development have shown that, from about the age of eleven, children can read and use maps to orientate themselves to a wider environment than their local neighbourhood (Sobel 1998, Nordström 2003). Such studies also point to the apparent lack of stimulation older children find in map drawing, preferring instead a more challenging activity which reflects their newly acquired spatial autonomy (Catling 1996, Sobel 1998).

Children's competency in reading complex maps strongly depends on this same spatial autonomy. As children get older they have more freedom to move and access different places beyond home, school and neighbourhood and, as such, to broaden their spatial knowledge (Al-Zoabi 2002, Nordström 2003). New places are incorporated (e.g. city centre, shopping malls) and new routes and types of transport are used to take them further away from their local neighbourhood to an ever-expanding territory. Not only do they interact with their surrounding environment, but also with a broader range of people who make their spatial experience more complex. A single drawing, therefore, with all the limitations discussed above, cannot entirely depict this newly acquired spatial knowledge. In this case, map reading proves to be more useful than map drawing. Reading of maps potentially involves much more than simply locating things in space; it is about moving through the landscape. This process can elicit communication of the diversity of young people's environmental experience (Kaplan 2000), ranging from their uses of the environment to their preferences and avoidances, as well as spatial expressions of social relations and social fear (Andersson 2002).

In our research, we wanted to create place maps through map reading, maps that allowed young people to identify and talk about their experiences of places. This process of place mapping involved (a) production of information by a collective activity and (b) representation of this information on a base map open to collective reference, both for cross-checking and analysis. Our intention was to let young people inscribe on conventional street maps their spatial experiences, creating a web of inter-linked paths and routes according to favourite and least favoured places, spaces of inclusion and exclusion, hang-out spots and contested spaces.

The place mapping methodology

The place mapping method was part of the focus groups conducted with youth participants in Edinburgh and Sacramento. The focus groups asked participants to identify the most and least favourite outdoor places in their community. The characteristics of environment and behaviour associated with these places, such as what participants do there, when and with whom they go there, how they describe the place, and why the place is their favourite or least favourite were also recorded and discussed. We also asked the participants to imagine their ideal place or how they would like to change or improve their community. The Sacramento participants were also asked to identify and discuss most and least favourite places at their school.

After a brief introduction about the study, each student was given a blank index card and asked to write their three favourite places on one side and their three least favourite places on the other side. In Scotland, the participants also recorded their gender. The cards were completed before any discussion began so that each focus group participant could record their favourite and least favourite places without being influenced by other participants. In addition, the index cards were a means to initiate the interaction by presenting participants

with a concrete activity, allowing less vocal participants to ensure their views were recorded, and providing data for further analysis.

The index cards were collected at the end of the focus group discussion. Following the completion of the index cards, the participants were asked to place dots on their selected places on a map of their community. The maps used for the activity were standard street maps that were enlarged and included the majority of the administratively defined community.

The school (the location of the focus groups) and other landmarks were located for the students at the beginning of the mapping exercise, to help orientate the participants to the map. In a few cases participants named places beyond the scope of the map, but easily located their selected place at the edge of the map and named each location. For the discussion of school places in Sacramento, a simple lined drawing of the school buildings was used. This is a drawing with which the students are familiar. The maps were 279 _ 432 mm (11 _ 17 inches) in Sacramento and 420 _ 594 mm (A2) (17 _ 23 inches) in Scotland and were mounted on a firm, light-weight board.

Two approaches were taken in the placement of 'place' dots onto the maps. In Sacramento, the participants were asked in a round-robin fashion to share their responses. Each participant was given the opportunity to name one place and locate it on a map of the community, and then the next participant named and located one of their places. This continued until all the participants had shared all three of their places. Duplicate places were named and located as well. The locating of the 'place' dots was followed with a guided discussion of each of the places. The mapping and discussion of the favourite places was completed before the participants were asked to identify and discuss their least favourite places. Each focus group produced a favourite and least favourite places map. The discussions were recorded on large flip charts where the participants could correct, add to or elaborate on the responses.

In Scotland, each participant was given three adhesive dots (female participants were given one colour and males another) and was asked to use them for marking favourite locations on the first map. While groups of participants were engaged with this activity, the facilitator stepped aside and let them work without interfering; our aim was to encourage discussion between them. As soon as the map was complete, the facilitator re-entered the conversation asking them what the dots meant, which places they represented, what the places looked like, whom they go there with, when they go, what they do there, and why these were their favourite places. The same procedure was followed for the compilation of 'the map of least favourite places'.

Each discussion was conducted by one facilitator. In some cases, there was a recorder present as well, taking notes. During the task, we observed that participants were discussing, comparing and debating the location of their selected places with each other, initiating further discussion on the topic.

The data collected from the focus groups was coded and analyzed using the qualitative research analysis software package, NVivo. A common set of codes was established for both communities and for all the responses (i.e. place types, activities, reasons for liking or disliking). In addition, the place maps were analyzed for patterns of place dot placement. For example, clustering of dots at specific places and location of outlying dots was noted. These dot patterns were compared to the verbal responses to ensure reliability.

Research setting and method

(a) Edinburgh case study

The first case study took place in Edinburgh, Scotland's capital and its second most populous city (population ca. 430,000) after Glasgow. The school chosen for the place

mapping techniques is the most centrally located, state-funded school in the city, housed in a recently renovated building with 686 enrolled pupils (HM Inspectorate of Education 2005). It has a varied socio-economic mix, providing free school meals to 17% of its pupils, a percentage slightly above the national average of 15% (Scottish Executive 2003).¹ This school was chosen because of the diversity of participants' socio-economic, ethnic and religious background in the context of the general population statistics in Scotland.

Six focus group interviews were conducted with 51 students (28 girls and 23 boys), using index cards and place mapping techniques, between June and December 2004. Four were with S1 pupils (12–13 year olds) and two with S5 pupils (16–17 year olds). Each discussion group consisted of seven to 10 participants and took place during the personal and social education (PSE) classes which lasted from one to two school lesson periods (40 minutes each).

The choice of class size, participants' age and time schedule was dependent on the school and the teacher responsible for the PSE programme.

(b) Sacramento case study

Focus groups using the place mapping technique were conducted at one high school in Sacramento, CA, the state's capital, with a population of ca. 460,000. The school where the focus groups were conducted is located in the southeast portion of the city and is one of seven traditional high schools in the Sacramento City School District. It has an enrolment of 2726 and, as with the overall Sacramento population, its student population is ethnically diverse.

The largest student populations are white (non-Hispanic) and Hispanic (both 24.1%), followed by Asian-American (23.6%) and African-American (21.7%). Many students report languages other than English spoken at home. These include Spanish, Hmong, Cantonese, Mien, Vietnamese and Russian. The students at the school come from low to moderately low-income families. Approximately 60% of the student body qualifies for the free or reduced school lunch program.² This school was chosen because of its ethnic diversity and socio-economic level. Forty 11th grade (16–17 year old) students participated in eight focus groups in Sacramento.

The focus groups were conducted during two separate class periods, both of which were government classes with the same teacher. The 'government' course was identified as the setting for the focus groups because all 11th grade students are required to take the course, therefore it was likely to have representation from the various academic levels and student interests. The government teacher voluntarily agreed to have her students participate in the focus groups. Parental approval for participating in the focus groups was obtained by consent forms taken home by the students.

Participants were evenly divided between boys and girls and each class of students was randomly divided into smaller groups of approximately five participants, each using a numbering method.

Analysis of results

(a) Edinburgh place mapping

The place mapping undertaken by the Edinburgh youth revealed their experience of the city centre as both a set of hangout spots where they felt comfortable and an arena of contested places. Their experience oscillated between favourite and least favourite, safe and dangerous places. First, the map of favourite places showed that the city centre is experienced as a linear route (Edinburgh's principal commercial street is Princes Street) connecting various key stopping points – mostly shops (see Figure 1)

Interviewer – what places did you put down as your favourite ones?

YP 1: Princes Street.

YP 2: The whole of Princes Street.

YP 3: The gardens . . . Princes Street gardens, and . . . Princes Mall.

[. . .]

Interviewer: What about you? What is your favourite place?

YP 4: Normally it is down there at the end of Princes Street . . . and then I like a shop, but I don't know which bit it's in. I think it's along that way, about there.

Interviewer: Who put this one [dot] down here? What is this place here?

YP 5: Oh that's McDonalds . . . I go there every time, or most of the time when I'm up there. I just like to go there

and meet my friends and not hang about on the street.

Interviewer – what is this place down here?

YP 6: That's St James Centre.

[. . .]

YP 4: It's got all of the stuff, it's got a Virgin Megastore . . . it's got all sort of shops . . . it's all there.

YP 3: We usually go up to the Saint James Centre and back to Princes Street. That is real fun.

Although these places had a particular function, teenagers often used them in unpredictable ways, or ways that transcend conventional usage. For example, most participants marked two McDonalds restaurants on the map: one was referred to as the place outside whose premises they hang out with their friends and the other as the place where they go inside to eat and talk. In similar terms, skateboarders described one of their favourite spots: although the square was planned for other recreational activities (such as sitting on benches), this group of teenagers reinterpreted it as a place for performing their skateboarding tricks. For young people, the planned orderliness and physical usage suggested in the design of a place did not appear to matter, it was rather the possibility of social and physical interaction that made it valuable to them. These 'loose-fit' spaces (Dovey 2000, Rivkin 2000) give young people the opportunity to invent their own rules and contribute to their process of 'becoming' (Ward Thompson 2002, p. 69).

By contrast, the mapping of least favourite places portrayed a different image of the city centre: that of contesting space and dangerous places, of territories and boundaries (see Figure 2). It was transformed into a 'turf map' where different groups of young people claimed ownership of different places, from a single street to a corner shop (see Moore 1986, p. 32). For a significant number of participants, what distinguished their experience of 'hanging out' was their use of different places according to which youth culture they belong to. Every group appropriated some space, creating distinct places fashioned by their microculture (Travlou 2004, 2007). A great number of participants expressed their discomfort with being in one particular street, claiming that the presence of a particular youth group, the 'Goths', made them avoid that area. They felt that the street belonged to those teenagers who, through their attitude, dress and behaviour, appropriated this place.

YP 1: Well some people, I suppose, don't like being in Cockburn Street, this street down there off Royal Mile.

YP 2: Well, you've got the whole Goth and chav thing, and I think if someone like me walked down there, I wouldn't feel intimidated but I'd feel out of place. Because everyone looks the same and someone who doesn't . . . you all get looked at things like that.

YP 3: I like this street and I love the shops but I don't hang out there. I think the atmosphere, it can be nice, but it's quite like 'this is our place, nobody else can come here' [referring to Goths] . . .

In overview, place mapping linked all these places, constructing an almost panoramic view of the city centre as experienced by young people.

(b) Sacramento community place mapping

The Sacramento community covers a large geographic area. The teenagers participating in the focus groups live and attend school approximately 13 km (eight miles) east of the

downtown commercial area and 13 km (eight miles) south of a popular shopping area. To visit these areas, most of the teenagers participating in the focus groups had either to use public transportation or get a ride from a friend or family member. The linear pattern of movement from place to place through the urban area that was uncovered in the Edinburgh focus groups was not as clearly repeated for the Sacramento teens. The desire for a downtown shopping experience seems similar, but the Sacramento teens were less likely to name specific stores or places and, instead, talked about the area in more general terms.

Typically, the participants selected places where they could hang out with their friends and places where they went for specific activities (see Figure 3). Overwhelmingly the teens agreed that the 'Downtown Plaza', an outdoor mall in the centre of the city, was one of their favourite places, as was 'Old Sacramento', a restored shopping area connected to the mall. Both areas provided the teens with a place for socializing, both with their friends and with youth from other schools. When asked what they did there, one male participant said that they 'holler at the opposite sex'. Another said that they liked to go there 'because they see people from other schools there'. They all agreed that these shopping areas were good places to 'kill time' and 'be with friends'.

In addition to the legitimate activity of shopping, the participants also talked about questionable activities that were either conducted by themselves or others. They began to discuss which stores were good for shop-lifting and how sometimes large groups of other 'kids' made it feel unsafe. They also talked about how they enjoyed hanging out in the 'Old Sacramento' area and making fun of the tourists there. In general, they liked these commercial areas because they felt they were away from adult supervision, at least away from adults they know.

The Sacramento teens also discussed a number of places where they participate in specific activities besides shopping. They hang out with their friends at movie theatres, bowling alleys, miniature golf courses and other recreation-focused businesses. They talked about places that gave them something to do and fun experiences that they could share with friends.

The least favourite places in Sacramento tended to include places where the teens had concerns about their safety and places that were dirty (see Figure 4). In particular the participants identified residential streets and neighbourhoods that they did not like, more so than commercial areas. Some of the comments regarding these places included:

YP 1: The only people I know who go there are gang-bangers and wanna-bes.

YP 2: It's a ghetto. Too many prostitutes.

YP 3: Scary, bad people, people who pick fights and sell drugs.

They also commented on the physical condition of these residential areas, noting that they were dirty and that the grass in the yards was tall. Many of the teens also did not like specific businesses where they had had previous trouble with the owner or others.

Lastly, one of the interesting disparities among the Sacramento teens was that some teens greatly valued the parkland along a major river in the city. It was a place where they could 'feel relaxed' and 'free' and they liked to fish, swim and just hang out. Other teens thought the river was a dangerous place. They had heard stories of people getting 'sucked into it' and drowning. They thought the shrubs and rocks were good places for people to hide and that homeless people used the river for bathing. The conversation regarding the river was particularly interesting in that the teens who were familiar with the river were surprised at the fervent fear of the other teens and had little sympathy for their strong negative emotions toward the place.

Reflections on what place mapping revealed

Let us imagine, for a while, the city as an urban stage where different behaviours and attitudes are performed by various groups of actors (users):

There may be myriad forms of performance, following distinct roles, scripts, choreographies, group formations, instructions and cues (Edensor 2000, p. 123). Hanging out and about in the city centre can be considered as a form of performance in the urban landscape, full of symbols and meanings for its performers (Kaye 2002). Each dot the young participants put on the map represents a certain location or place that they include or exclude in their itinerary in the city. In the former case, these are places where they feel welcomed and comfortable to be, places that they appropriate with their presence. In the latter case, these are contested places where other users – often rival teenage groups – perform different behaviours and territorialise. Following this approach, place mapping is a method to visually locate young people's spatial performance on routes from one place (dot) to another (dot) and at specific places. Through mapping, the dynamic experience of people moving through landscape is captured in discussion. It is a medium through which to elicit a collective view of teenagers' shared (and dynamic) experience of hanging out and about in the city, relating, comparing and contrasting such experiences not only with each other but also with the structure of the urban environment as a whole. Place mapping (re)constructs the dynamic relationship of young people with their physical context; this is something that cannot easily be elicited solely by focus group interviews. Although maps are static representations of the real world, the place mapping sessions with our young participants brought to the surface the dynamic status of their experience: exploring, using and moving between different places in the city.

Discussion of the methodology – strengths and limitations

The above reflections highlight the strength of place mapping as a method, a method that proved amenable to and effective in exploring teenagers' experience of public places in their community.

The method holds promise for use in eliciting youth experiences in and perceptions of physical environments. However, several limitations and suggestions for modifications have also been identified. The positive aspects of the place mapping approach that we experienced included the way that it:

- Encouraged discussion amongst participants
- Ensured equitable participation
- Structured and focused the discussion
- Produced a geographic record of places
- Provided index cards and discussion notes for verification of the map data

Limitations of this method related to:

- Location, composition and size of focus groups
- Content and quality of base maps
- The need for accompanying data with the maps.

One of the more salient outcomes of the place mapping method was the positive impact that the use of the maps had on encouraging discussion and dialogue among the participants. Particularly when conducting research in schools, it is important to promote the active engagement of all students in the interview process and to eliminate as much as possible the problematic character of the classroom as an interview place. The use of place mapping appeared to assist in this by making students feel more at ease with the research questions and removed the focus from the adult researchers. It created a domain where the teenagers could share their perceptions and (re)construct the dynamic relationship of their social

interactions in place. Individual mapping exercises do not accommodate this dynamic and can be perceived as a more conventional (and even a competitive) school exercise. Likewise, focus group discussions alone do not engage the participants in the shared task of producing a graphic representation of their opinions.

One component of encouraging discussion among the participants was the desirability of ensuring that each youth felt comfortable offering their thoughts to the discussion. Morrow (2001) says that, in research with children and young people, a range of methods should be used to enable them to participate if and when they want to, as different students respond to different methods in diverse ways, e.g. those who do not participate at all in discussions might participate by writing or drawing. For young children, a map-drawing activity may be perceived as fun in the interview process; however, for teenagers, the same activity may be intimidating because it suggests that their drawing skills are being tested. The challenge for researchers is to find a method that is more sensitive to young people's particular competencies or interests, to make them feel at ease with their classmates and the researcher. At the same time, this method should 'maximise [young people's] ability to express their views at the point of data-gathering; enhancing their willingness to communicate the richness of the findings' (Punch 2002, p. 330; after Hill 1997, p. 180).

From previous experience, we realized that not all participants are equally vocal and that a few individuals could dominate discussions. The silent recording of favourite and least favourite places on cards, as the initial activity, and the round-robin placement of dots on the maps allowed all the young people to voice their opinions. For many participants, the selection of their places by others validated their own opinions and encouraged them to actively engage in the discussions. For those youth who named places that were not as frequently selected, the method also allowed them to share their opinions. In addition, the use of existing street maps and stick-on dots eliminated the potential hesitancy of some youth to participate in an activity where they would have to draw their favourite and least favourite places. This simple, non-coercive technique proved an effective means for giving the youth confidence to identify places and express their views.

The place mapping method provided a clear structure to the discussions and focused the attention of the participants on the geographic area represented by the map. Many researchers recognize the importance of 'task-based' or 'warm-up' activities (Hart 1997, Punch 2002), such as map reading or drawing for fun, to tap into children's and young people's activities. This method expands upon this notion by integrating the map reading into the central focus of the discussion. The guided discussion used the map as a tool to focus the participants on talking about actual places, not just types of places or general impressions. The process of mapping, rather than the map itself as object, is a key outcome of value to be recorded and analysed.

Another strength of this method is that it allowed for the exploration of the youths' engagement with place at different scales and in different social domains. The participants projected their discussions beyond the limitations of the two-dimensional map. The map served as a prompt to develop a richer image of the city as a stage where their social life was performed. As the participants interacted and debated, new insights were uncovered about their range of opinions and their criteria for choosing places.

An obvious strength of this method is the production of a graphic representation of teenagers' favourite and least favourite places. This representation allows for a visual interpretation of the location of places identified, their proximity to one another, and their location as it relates to the participants' home, school or other important environments. The mapping also provides an indication of places that they do not frequent, do not value, or fear. In some research situations, this information could prove to be very useful information for community planning and development agencies.

Lastly, the inclusion of individually completed cards with the selected places identified in the mapping exercise and the written or audio recordings of the discussions proved extremely useful in the coding and analysis of the aural data. The information on the cards allowed the researchers to have an accurate accounting for the number of participants that selected each place. This accounting would be difficult, if not impossible, through audio transcripts alone. A comparison of the places noted on the cards and those located on the map and discussed also provides for a verification of the data.

One of the main problems faced in conducting group interviews in schools is the setting itself. Although the schools where the research was conducted provided access to a representative sample of young people, Morrow (2001) and others have challenged whether school-based research is truly 'participatory'. As a place of interview, the school may be a contested space characterized by a microgeography of power relations among adult teachers (power) and young pupils (powerless) (Longhurst 2003, Anderson 2004). Research, in the UK context at least, has illustrated that schools are highly structured and regulated institutions that promote and (re)produce formal, hierarchical relationships between children and adults (Burgess 1986, Alderson 2000, Barker 2000). In a formal setting like the school, organised and controlled by adults, pupils feel less in control over decision-making or expressing views in an interview arranged for them by teachers and researchers (Punch 2002). Quite often, pupils may feel pressured by teachers to participate in different activities and tasks like group interviews, where they have less power to dissent (Morrow and Richards 1996). However, if schools are not used, there are very few other child- or youth-specific places which attract truly representative groups of young people and where research can be conducted, particularly group interviews (Punch 2002). In this context, the inequalities in status and power between young people and adults and the place where data is collected must be accounted for as a potential influence on the data gathering process.

In addition, the particular dynamics within focus groups can create challenges for participation. Our focus groups comprised classmates who, inevitably, were known to each other but who were not necessarily good friends. It is often recommended that focus group participants should be unfamiliar with each other to encourage an open discussion, but this is not always possible and the use of pre-existing groups has also been recommended (Krueger 1995, 1998). Bloor et al. (2001) and Barbour and Kitzinger (1999) suggest that, although focus groups of strangers may encourage some people to speak more freely and openly, they may also take longer to warm up. They have found that using pre-existing groups allows them to tap into the natural interaction between friends and that discussion and debate tends to be easier. Woolley et al. (1999b), working specifically with children and young people, found that successful focus groups comprise friendship groups wherein the participants know each other; they appear less intimidated and embarrassed to speak up in front of the group than in a randomly selected group of classmates. In our research we also found that focus groups with more than eight participants did not allow for the same in-depth participation as the smaller groups. The participants did not engage in the discussions as readily or did not have the same opportunities for expressing their opinions.

One limitation of the place mapping method is in the predetermined content of existing maps. It is likely that these maps will not include all the places that the participants would like to discuss. In the Sacramento study, a few places that were located beyond the boundaries of the map were identified by the teens. As the teens put their place dots on the maps, these participants simply placed their dots along the edge of the map in the general location of the place. The researchers then made a note of the actual location of the place. The completion of the index cards prior to mapping the places helped to ensure that places were not omitted just because they did not appear on the map. Another limitation of the base maps may be their visual quality. Care should be taken to select maps that contain

relevant information (i.e. major streets, natural features, parks, schools), but that are not so detailed that they become confusing.

In addition, the quality of copies or enlargements/reductions should be carefully controlled. As with other focus groups, the recording of the discussions is an important component of the research. We used two techniques for recording our discussions. In Edinburgh, audio tapes were used and, in Sacramento, group note-taking was used. Although, for methodological consistency, it would have been beneficial if the same technique had been used in both sites, we view the use of the two techniques as an opportunity to explore their advantages and disadvantages. The use of a tape recorder to record discussions might have inhibited some articulation of opinions and no doubt there was some peer influence at play in how places were identified and described. On the other hand, these media-conscious young people appeared very comfortable with the idea of speaking into a microphone and, in one group, chose to pass the microphone around so that each person could speak into it individually, perhaps mimicking television shows with which they appeared very familiar. An unexpected benefit of this approach is that the microphone plays a similar role of a talking stick in Native American cultures. The talking stick is passed along to the person who has something to add to the discussion and everyone's attention is focused on that person. The group note-taking approach involved the facilitator recording responses onto flipcharts in front of the entire group. This approach allowed the participants to observe what the facilitator was recording and to ensure that their statements were recorded correctly.

Unlike the audio recordings, this record does not provide a word-for-word accounting of the discussion, but it can provide an accurate portrayal as long as the facilitator is thorough and careful. In addition, it avoids the potential problem of misinterpreting the conversations after the fact. One suggestion for other researchers who use the group note-taking approach is to record some of the direct quotes of participants. Quotes are often very powerful in conveying the concerns and opinions of the participants. We also suggest that other researchers consider using both the audio recording and note-taking methods in tandem. Together, these recording methods provide the most accurate and complete record of youth discussions.

Lastly, place maps need accompanying data to provide the most complete picture of youth opinions. The mapping process should be used in conjunction with structured questions and guided discussion. Our experience shows that the researcher should never assume that they understand why a participant has identified a particular place. Although two or twenty teenagers may select the same place as important to them, the reasons are individualized and often quite varied. Although this point will seem obvious to researchers, there may be a tendency to discard or discourage discussion if at first glance it appears that all the participants are in agreement. In addition, as we have discussed earlier, we have found the accompanying data gathered through the index cards to be valuable.

Conclusion

Drawing upon Cahill's (2000, p. 255) theoretical framework of youth 'street literacy', this research method tried to interpret 'young people's environmental transactions and their strategies for negotiating the urban environment'. Experiential place mapping offers the means to explore some of the multifarious ways young people perceive and experience their local environment and how, through this experience, they construct their own identities. Such a technique, accompanied by the preparatory work with individual index cards and the ensuing focus group discussion, also allows the development of a rich and dynamic mapping of the environment that is sensitive to the social nuances of youth and different groups and cultures within youth. The place maps that were the products of this process were not factual accounts of young adults' surroundings but, together with the recorded discussions of the mapping process, they become experiential maps, representations of young people's reality and themselves as they engage with it. Undeniably, this collective activity was influenced by

our presence as researchers; the focus however was not on us as interviewers, but on the place map production. This process of producing a place map both generated and anchored discussions.

The challenge for the researchers is to find ways of presenting the findings that are meaningful to others as well as to the participants and that best convey the richness of the data collected orally through the medium of the map. Such research can be an important step in developing a vocabulary with which to discuss inclusive planning and design of the public realm – a realm that includes young people and that can respect their place in society.

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Figure 4. Place map as used by students to describe their least favourite places in their school in Sacramento Sacramento (map reproduced with permission of copyright owner, Compass Maps, Inc. Reproductions without permission from copyright owner are in violation of federal copyright law and will be prosecuted).